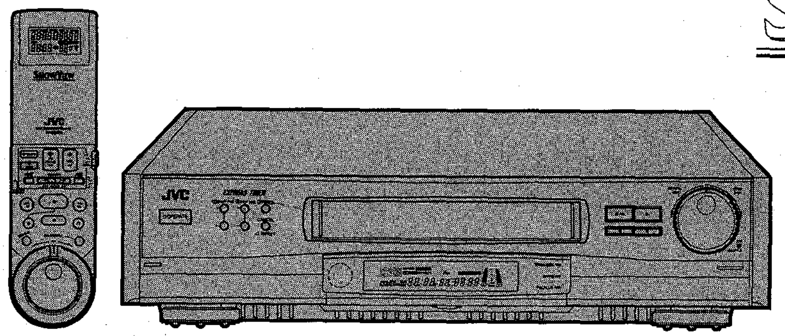
JVC

SERVICE MANUAL

VIDEO CASSETTE RECORDER

HR-S9200EG/EH



SHOWVIEW

PALplus

Hi-Fi

S-VHS 625

SPECIFICATIONS *(The specifications shown pertain specifically to the model HR-S9200EG)*

GENERAL

Power requirement	AC 220 – 240 V∿, 50/60 Hz
Power consumption	34 W
Temperature	
Operating	5°C to 40°C
Storage	–20°C to 60°C
Dimensions (WxHxD)	459 x 109 x 387 mm
Weight	6.6 kg
Format	S-VHS/VHS PAL standard
Maximum recording time (SP)	240 min. with E-240 video cassette
(LP)	480 min. with E-240 video cassette

VIDEO/AUDIO

Signal system	PAL-type colour signal and CCIR monochrome signal, 625 lines/50 fields
Recording system	Rotary two-head helical scan system with slant double-azimuth combination video heads
Signal-to-noise ratio	43 dB
Horizontal resolution	250 lines (VHS) 400 lines (S-VHS)
Frequency range	70 Hz to 10,000 Hz (Normal audio) 20 Hz to 20,000 Hz (Hi-Fi audio)
Input/Output	21-pin scart connectors (IN/OUT x 1, IN/DECODER x 1) RCA connectors (VIDEO IN x 1, AUDIO IN x 2, AUDIO OUT x 1) S connectors (IN x 2, OUT x 1) Microphone jack x 1

TUNER/TIMER

Channel coverage	VHF 47 – 89/104 – 300/302 – 470 MHz UHF 470 – 862 MHz
Aerial output	UHF channel 36 (Adjustable 32 – 40)
Memory backup time	60 min.

ACCESSORIES

Provided accessories	Aerial cable, Infrared remote control unit, "R6" battery x 2, AC power cord, Audio cable, S-Video cable
Optional accessory	VPT adapter VU-V142E

Specifications shown are for SP mode unless otherwise specified.
Design and specifications subject to change without notice.

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Important Safety Precautions

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

● Precautions during Servicing

1. Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product. When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.

2. Parts identified by the ⚠ symbol and shaded (▨) parts are critical for safety.
   Replace only with specified part numbers.
   Note: Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.

3. Fuse replacement caution notice.
   Caution for continued protection against fire hazard.
   Replace only with same type and rated fuse(s) as specified.

4. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads

5. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers
   4) Insulation sheets for transistors
   5) Barrier

6. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

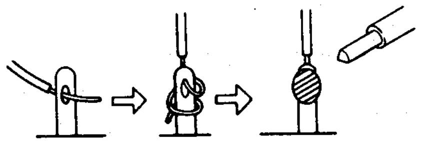


Fig. 1

7. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)

8. Check that replaced wires do not contact sharp edged or pointed parts.

9. When a power cord has been replaced, check that 10–15 kg of force in any direction will not loosen it.

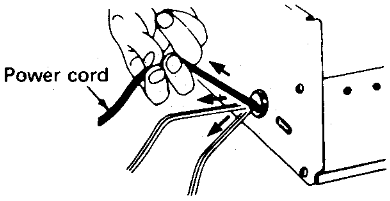


Fig. 2

10. Also check areas surrounding repaired locations.

11. Products using cathode ray tubes (CRTs)
    In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits. Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

12. Crimp type wire connector
    In such cases as when replacing the power transformer in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.
    1) **Connector part number** : E03830-001
    2) **Required tool** : Connector crimping tool of the proper type which will not damage insulated parts.
    3) **Replacement procedure**
       (1) Remove the old connector by cutting the wires at a point close to the connector.
       Important : Do not reuse a connector (discard it).

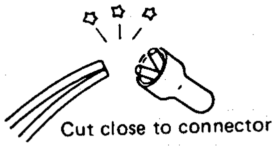


Fig. 3

(2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

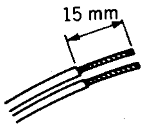


Fig. 4

(3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

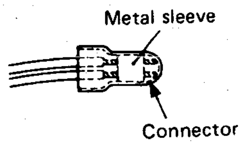


Fig. 5

(4) As shown in Fig. 6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

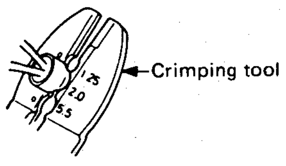


Fig. 6

(5) Check the four points noted in Fig. 7.

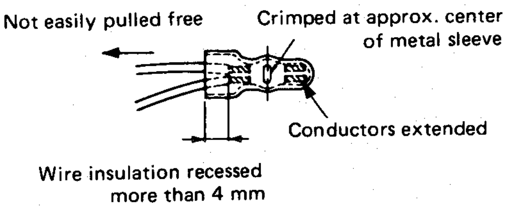

Not easily pulled free
Crimped at approx. center of metal sleeve
Conductors extended
Wire insulation recessed more than 4 mm

Fig. 7

● Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions, Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

1. **Insulation resistance test**
   Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

2. **Dielectric strength test**
   Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

3. **Clearance distance**
   When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See table 1 below.

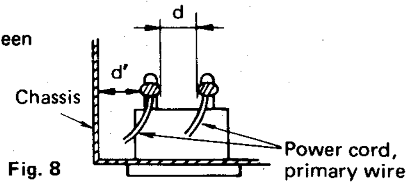


Fig. 8

4. **Leakage current test**
   Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).
   Measuring Method: (Power ON)
   Insert load Z between earth ground/power cord plug prongs and externally exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See figure 9 and following table 2.

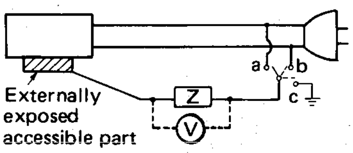


Fig. 9

5. **Grounding (Class I model only)**
   Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.).
   Measuring Method:
   Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See figure 10 and grounding specifications.

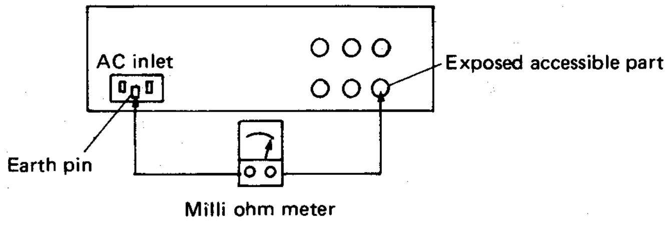


Fig. 10

Grounding Specifications

Region	Grounding Impedance (Z)
USA & Canada	Z ≦ 0.1 ohm
Europe & Australia	Z ≦ 0.5 ohm

AC Line Voltage	Region	Insulation Resistance (R)	Dielectric Strength	Clearance Distance (d), (d')
100 V	Japan	R ≧ 1 MΩ/500 V DC	AC 1 kV 1 minute	d, d' ≧ 3 mm
100 to 240 V			AC 1.5 kV 1 minute	d, d' ≧ 4 mm
110 to 130 V	USA & Canada	–	AC 1 kV 1 minute	d, d' ≧ 3.2 mm
110 to 130 V 200 to 240 V	Europe & Australia	R ≧ 10 MΩ /500 V DC	AC 3 kV 1 minute (Class II) AC 1.5 kV 1 minute (Class I)	d ≧ 4 mm d' ≧ 8 mm (Power cord) d' ≧ 6 mm (Primary wire)

Table 1 Specifications for each region

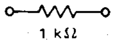
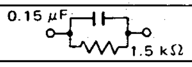
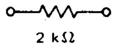
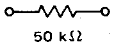
AC Line Voltage	Region	Load Z	Leakage Current (i)	a, b, c
100 V	Japan	 1 kΩ	i ≦ 1 mA rms	Exposed accessible parts
110 to 130 V	USA & Canada	 0.15 µF 1.5 kΩ	i ≦ 0.5 mA rms	Exposed accessible parts
110 to 130 V 220 to 240 V	Europe & Australia	 2 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Antenna earth terminals
		 50 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Other terminals

Table 2 Leakage current specifications for each region

Note: These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

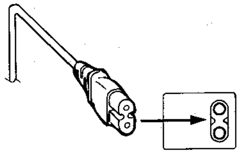
Safety Precautions

The rating plate and the safety caution are on the rear of the unit.

WARNING: DANGEROUS VOLTAGE INSIDE
WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

The OPERATE button does not completely shut off mains power from the unit, but switches operating current on and off.

CAUTION



- To avoid electric shock or damage to the unit, first firmly insert the small end of the AC power cord into the recorder until it is no longer wobbly, and then plug the larger end of the AC power cord into an AC outlet.
- When you are not using the recorder for a long period of time, it is recommended that you disconnect the power cord from the AC outlet.
- Dangerous voltage inside. Refer internal servicing to qualified service personnel. To prevent electric shock or fire hazard, remove the power cord from the AC outlet prior to connecting or disconnecting any signal lead or aerial.

WARNING
There are two different types of SECAM colour systems: SECAM-L, used in FRANCE (also called SECAM-West), and SECAM-B, used in Eastern European countries (also called SECAM-East).

1. This recorder can also receive SECAM-B colour television signals for recording and playback.
2. Recordings made of SECAM-B television signals produce monochrome pictures if played back on a video recorder of SECAM-L standard, or do not produce normal colour pictures if played back on a PAL video recorder with SECAM-B system incorporated (even if the TV set is SECAM-compatible).
3. SECAM-L prerecorded cassettes or recordings made with a SECAM-L video recorder produce monochrome pictures when played back with this recorder.
4. This recorder cannot be used for the SECAM-L standard. Use a SECAM-L recorder to record SECAM-L signals.

IMPORTANT:

- It may be unlawful to record or play back copyrighted material without the consent of the copyright owner.
- Please read the "Precautions" section of this instruction manual before installing or operating the recorder.

Video tapes recorded with this video recorder in the LP (Long Play) mode cannot be played back on a single-speed video recorder.

- Cassettes marked "S-VHS" and "VHS" can be used with this video cassette recorder. However, S-VHS recordings are possible only with cassettes marked "S-VHS".
- ShowView is a trademark applied for by Gemstar Development Corp. ShowView system is manufactured under licence from Gemstar Development Corporation.

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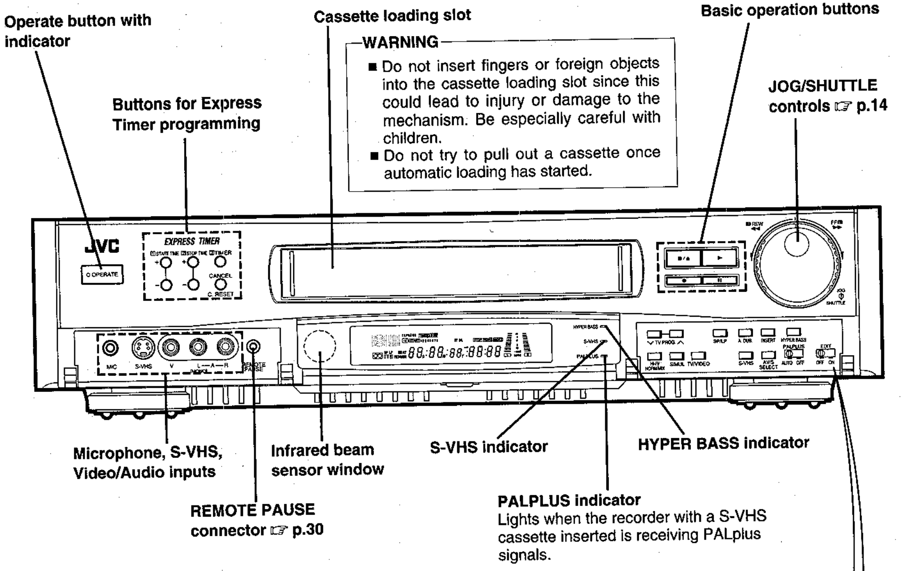
Controls And Indicators

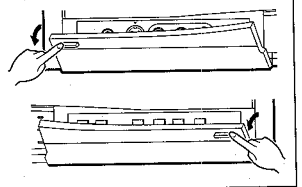
Front Panel

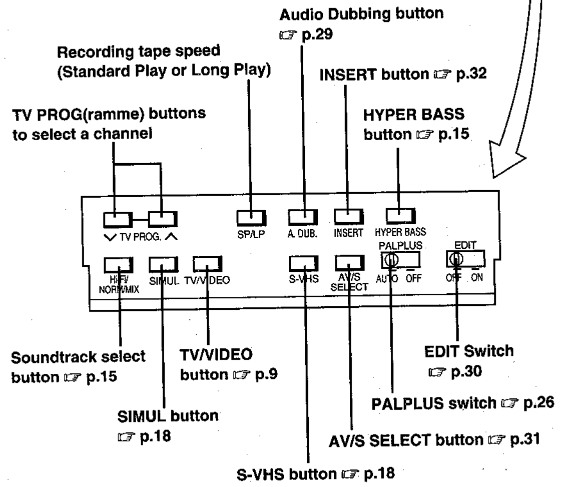

Operate button with indicator
Buttons for Express Timer programming
Cassette loading slot
Basic operation buttons
JOG/SHUTTLE controls ☞ p.14
Microphone, S-VHS, Video/Audio inputs
Infrared beam sensor window
REMOTE PAUSE connector ☞ p.30
S-VHS indicator
HYPER BASS indicator
PALPLUS indicator
Lights when the recorder with a S-VHS cassette inserted is receiving PALplus signals.

WARNING

- Do not insert fingers or foreign objects into the cassette loading slot since this could lead to injury or damage to the mechanism. Be especially careful with children.
- Do not try to pull out a cassette once automatic loading has started.

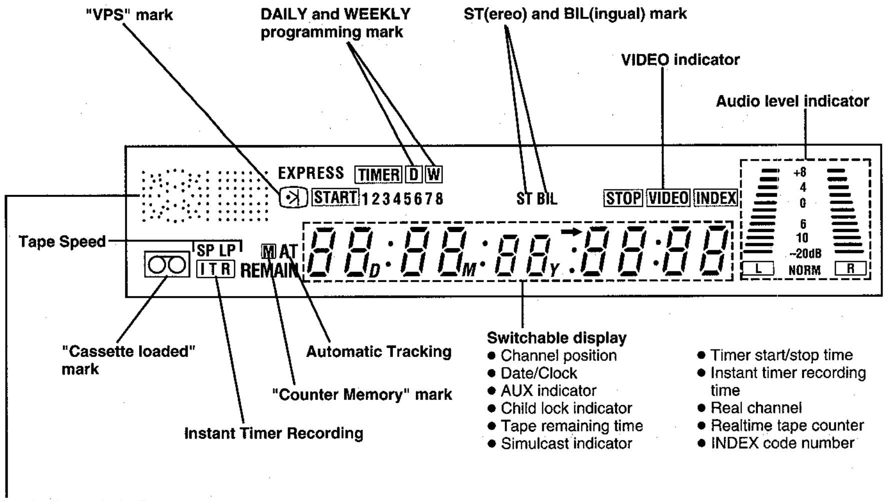
Open lid to access covered connectors and buttons.




Audio Dubbing button ☞ p.29
Recording tape speed (Standard Play or Long Play)
INSERT button ☞ p.32
TV PROG(ramme) buttons to select a channel
HYPER BASS button ☞ p.15
∨ TV PROG. ∧
SP/LP
A. DUB.
INSERT
HYPER BASS
PALPLUS
EDIT
HiFi/NORM/MIX
SIMUL
TV/VIDEO
S-VHS
A/S SELECT
AUTO OFF
OFF ON
Soundtrack select button ☞ p.15
TV/VIDEO button ☞ p.9
EDIT Switch ☞ p.30
SIMUL button ☞ p.18
PALPLUS switch ☞ p.26
AV/S SELECT button ☞ p.31
S-VHS button ☞ p.18

Controls And Indicators (cont'd)

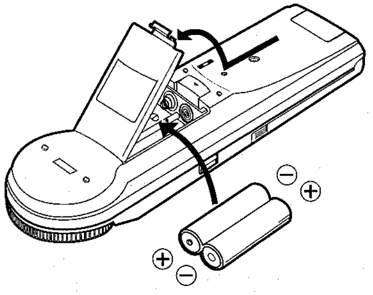
Display Panel


"VPS" mark
DAILY and WEEKLY programming mark
ST(ereo) and BIL(ingual) mark
VIDEO indicator
Audio level indicator
EXPRESS TIMER D W
START 12345678
ST BIL
STOP VIDEO INDEX
+8
4
0
6
10
-20dB
L NORM R
Tape Speed
SP LP
ITR REMAIN
M AT
"Cassette loaded" mark
Automatic Tracking
"Counter Memory" mark
Instant Timer Recording

Switchable display
- Channel position
- Date/Clock
- AUX indicator
- Child lock indicator
- Tape remaining time
- Simulcast indicator
- Timer start/stop time
- Instant timer recording time
- Real channel
- Realtime tape counter
- INDEX code number

Symbolic mode indicators

PLAY:	▷	REVERSE PLAY:	◁	RECORD:	○	INSERT:	▷
FF:	▷▷	REW VARIABLE SHUTTLE SEARCH:	◁ ◁◁	RECORD PAUSE:	○ ▯▯	INSERT PAUSE:	▷ ▯▯
REW:	◁◁	STILL: FORWARD SLOW:	▷ ▯▯	AUDIO DUBBING:	◌	AUDIO DUBBING INSERT:	▷
FF VARIABLE	▷ ▷▷	STILL:	◁ ▯▯	AUDIO DUBBING	◌ ▯▯	AUDIO DUBBING	▷ ▯▯



Installing Batteries

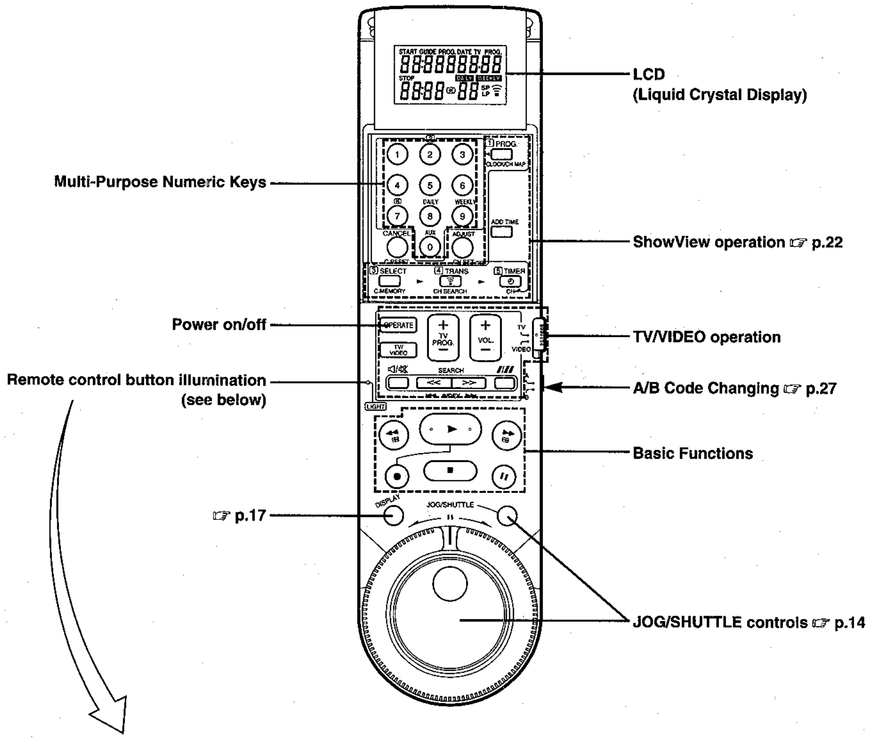
1 Open the battery compartment cover.
2 Insert 2 "R6"-size batteries (provided) in the correct directions.
3 Replace the cover.

How To Use

The remote control can operate most of your video recorder's functions, as well as basic functions of TV sets of JVC and other brands. ☞ p. 33.

- ■ Point the remote control toward the sensor window.
- ■ The maximum operating distance of the remote control is about 8 m.

Wireless Remote Control

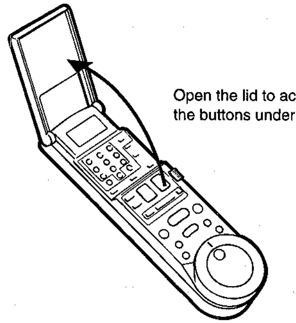

LCD (Liquid Crystal Display)
Multi-Purpose Numeric Keys
ShowView operation ☞ p.22
Power on/off
TV/VIDEO operation
Remote control button illumination (see below)
A/B Code Changing ☞ p.27
Basic Functions
☞ p.17
JOG/SHUTTLE controls ☞ p.14

Using the LIGHT button

This function lights up the remote control's Basic Operation buttons and simplifies video operation in dark rooms.

1. Press the LIGHT button and find the Basic Operation button you need to use.
2. Release the LIGHT button (the Basic Operation buttons will stay illuminated for approx. 4 seconds) and press the appropriate Basic Operation button.

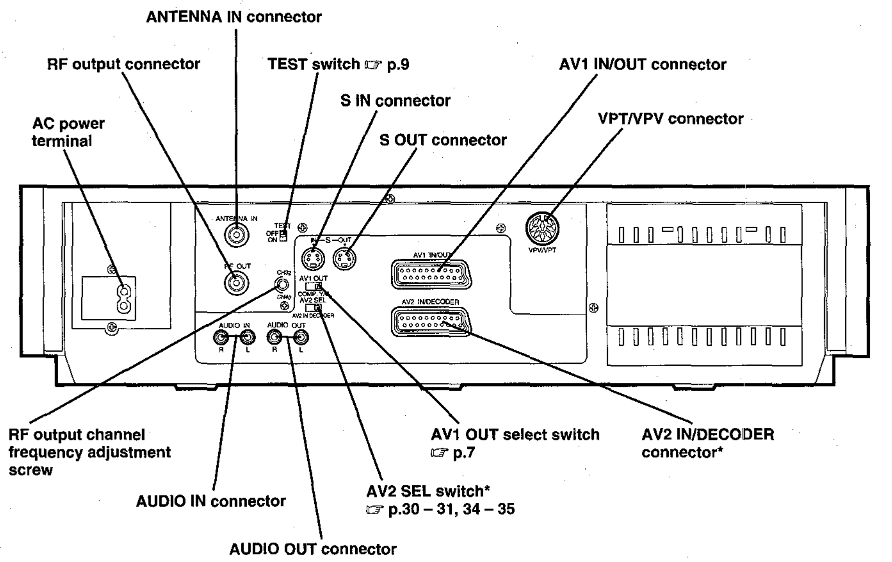
- Although the Basic Function buttons stay illuminated for as long as the LIGHT button is pressed, the LIGHT button must be released before the Basic Function buttons can be used. Also, keeping the buttons illuminated causes drain on the remote control's batteries; don't use the LIGHT button when you don't have to.



Open the lid to access the buttons underneath.

Controls And Indicators (cont'd)

Rear Panel

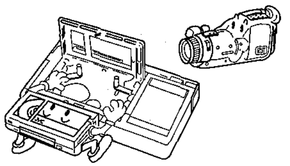

ANTENNA IN connector
RF output connector
TEST switch ☞ p.9
AV1 IN/OUT connector
S IN connector
VPT/VPV connector
AC power terminal
S OUT connector
RF output channel frequency adjustment screw
AV1 OUT select switch ☞ p.7
AV2 IN/DECODER connector*
AUDIO IN connector
AV2 SEL switch* ☞ p.30 – 31, 34 – 35
AUDIO OUT connector

***When AV2 SEL switch is set to AV2 IN:** AV2 IN/DECODER connector works as auxiliary input connector.
When AV2 SEL switch is set to DECODER: AV2 IN/DECODER connector works as input connector for a decoder.

Usable Cassettes

Full-Size VHS
E-30 (SE-30**)
E-60 (SE-60**)
E-90
E-120
E-180 (SE-180**)
E-240

Compact VHS*
EC-30 (SE-C30**)
EC-45 (SE-C45**)

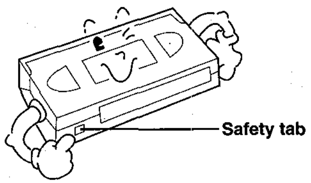


* Compact VHS camcorder recordings can be played on this video recorder. Simply place the recorder cassette into a VHS Cassette Adapter and it can be used just like any full-sized VHS cassette.

** This video recorder can record on regular VHS and Super VHS cassettes. While only VHS signals can be recorded on regular VHS cassettes, both VHS and Super VHS signals can be recorded and played back using Super VHS cassettes.

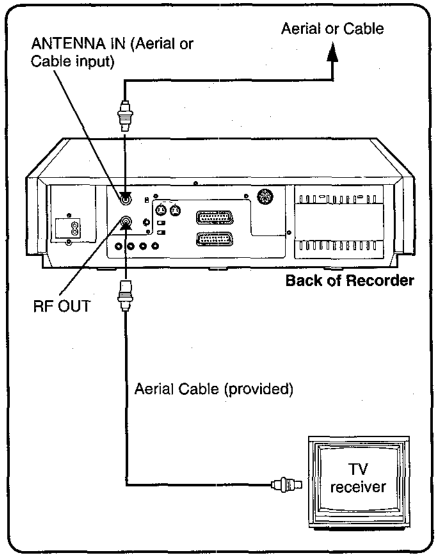
Accidental Erasure Prevention

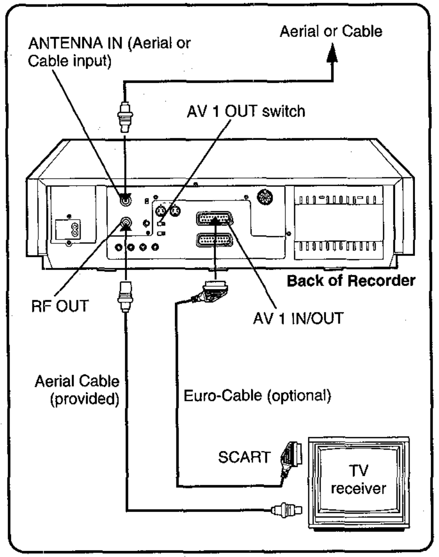
To prevent accidental recording on a recorded cassette, remove its safety tab. To record on it later, cover the hole with adhesive tape.



Installation

It's essential that your video recorder be properly connected. Follow these steps carefully. THESE STEPS MUST BE COMPLETED BEFORE ANY VIDEO OPERATION CAN BE PERFORMED.


ANTENNA IN (Aerial or Cable input)
Aerial or Cable
Back of Recorder
RF OUT
Aerial Cable (provided)
TV receiver


ANTENNA IN (Aerial or Cable input)
Aerial or Cable
AV 1 OUT switch
Back of Recorder
RF OUT
AV 1 IN/OUT
Aerial Cable (provided)
Euro-Cable (optional)
SCART
TV receiver

A RECORDER-TO-TV CONNECTION

RF CONNECTION

For TV sets without AV input terminals:

1. Connect the TV aerial cable to the recorder.
2. Connect the recorder to the TV's aerial terminal.

AV CONNECTION

For TV sets with AV input terminals:

1. Connect the aerial, recorder and TV as per "RF CONNECTION".
2. Connect the recorder to the TV's 21-pin SCART connector.

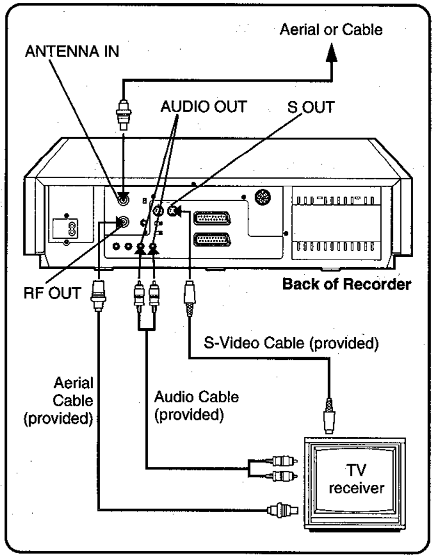
AV1 OUTPUT SIGNAL SELECTION

AV1 OUT
COMP. Y/C

The AV1 IN/OUT connector accepts only a composite signal (regular video signal), but can deliver either a composite video signal or a Y/C signal (a signal in which the luminance and chrominance signals are separated) according to the setting of the rear panel AV1 OUT switch.

- If your TV's SCART connector is compatible only with the regular video signal, set this switch to COMP.
- If your TV's SCART connector is compatible with the Y/C signal, set this switch to Y/C. You will better enjoy high-quality S-VHS pictures.
- If your TV's SCART connector is RGB-compatible, connect the KM-V7EG RGB Signal Converter (optional) between the AV1 IN/OUT connector and the TV's SCART connector, and set this switch to Y/C. The Y/C signal will be converted into an RGB signal for reproduction of high-quality S-VHS pictures.

Installation (cont'd)



RECORDER-TO-TV CONNECTION (cont'd)

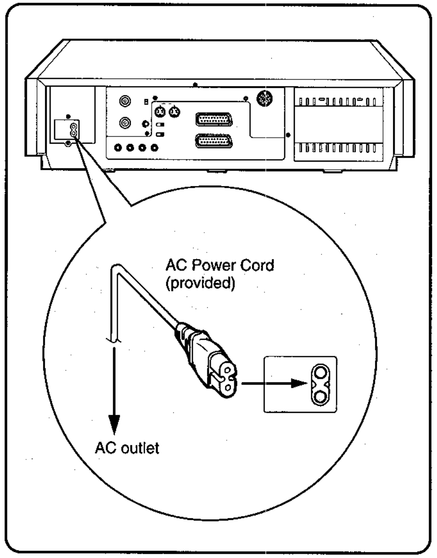
S-VIDEO CONNECTION

For TV sets with an S-VIDEO input terminal:

1. Connect the aerial, recorder and TV as per "RF CONNECTION".
2. Connect the recorder's S OUT terminal to the TV's S-VIDEO IN terminal.
3. Connect the recorder's AUDIO OUT terminals to the TV's AUDIO IN terminals.

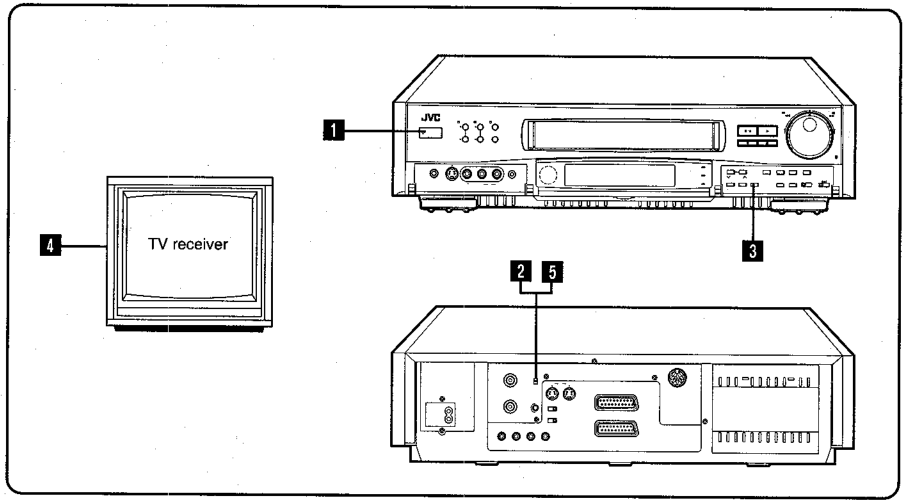
NOTES:

- To make the most of Super VHS picture performance, we recommend you use the S-VIDEO connection.
- To operate the recorder with your TV using the S-VIDEO connection, set your TV to the VIDEO (or AV mode).
- If your television is not stereo-capable, use the recorder's AUDIO OUT connectors to connect to an audio amplifier for Hi-Fi stereo sound reproduction.



B CONNECT RECORDER TO AC OUTLET

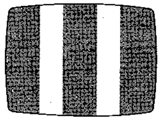
1. First, firmly insert the small end of the AC power cord into the recorder, and then plug the larger end of the AC power cord into the AC outlet.



C TUNE THE TV TO YOUR VIDEO RECORDER

The video recorder sends picture and sound signals via the RF connecting cable to your TV on UHF channel 36.

TEST SIGNAL



1. Turn on the recorder.
2. Set the TEST switch to ON.
3. Press TV/VIDEO to engage the VIDEO mode.
4. Set your TV to the video channel. Tune the TV to bring the two vertical white bars on the screen most clearly. (UHF/CH 36)
   - Your TV should be set to the channel designated for use with a video recorder or to a spare channel if there is not a specified video channel on your TV.
5. Reset the TEST switch to OFF.

NOTES:

- If CH36 is occupied by a local station, adjust the RF output channel adjustment screw to use another channel between CH32 and CH40 instead.
- If some interference noise is continually seen on the screen, consult your JVC dealer.

IMPORTANT:

With RF Connection

- It is always necessary to set your TV's channel to UHF channel 36 (or adjusted channel) to operate the recorder with your TV.

With AV Connection

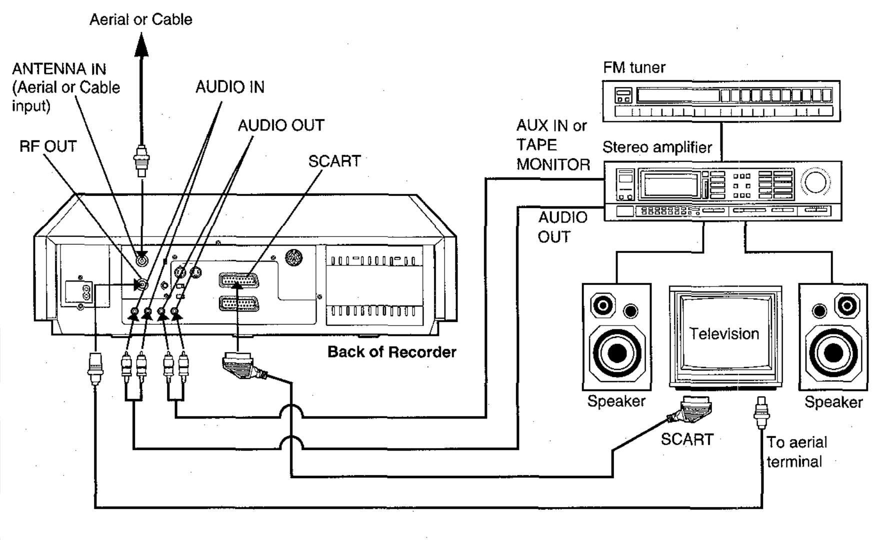
- Set your TV to the VIDEO (or AV), Y/C, or RGB mode according to the type of your TV's SCART connector.
- For switching the TV's mode, refer to the instruction manual of your television.
- The TV/VIDEO button switches the recorder's mode between TV and VIDEO. When the power is turned on, the recorder's TV mode is selected. To use the recorder's function, select the VIDEO mode.
- When the TV/VIDEO button is used to change the recorder's mode to VIDEO, the connected TV's mode also switches to VIDEO automatically.

With S-VIDEO Connection

- Set your TV to the VIDEO (or AV) mode. The S-VIDEO connection has priority over AV connection.

Installation (cont'd)

CONNECTING TO HI-FI STEREO SYSTEM


Aerial or Cable
ANTENNA IN (Aerial or Cable input)
RF OUT
AUDIO IN
AUDIO OUT
SCART
Back of Recorder
AUX IN or TAPE MONITOR
AUDIO OUT
FM tuner
Stereo amplifier
Speaker
Television
Speaker
SCART
To aerial terminal

If you have a Hi-Fi stereo system, you can connect your video recorder to it so that the sound can be heard through your Hi-Fi system. Please make these additional connections:

HI-FI AUDIO CONNECTION

1. Connect the AUDIO IN L and R connectors of the recorder to the recording output terminals of the amplifier.
2. Connect the AUDIO OUT L and R connectors of the recorder to the AUX IN or TAPE MONITOR terminals of the amplifier.

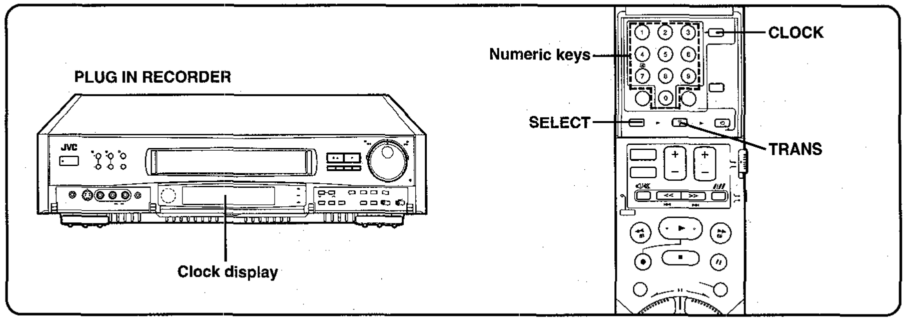
NOTES:

- Make sure L and R are correct when connecting the audio input and output connectors of the recorder to a stereo amplifier.
- If stereo or bilingual TV broadcasts are receivable in your area, this recorder can record them independently of the TV set and play them back through the connected audio system.
- When listening to sound from the connected stereo system, turn down the sound volume of the TV completely.

CAUTION:

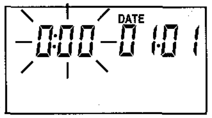
- This recorder has a dynamic range of more than 90 dB with regards to its hi-fi audio capability. It is recommended that you check the maximum level if you are going to listen to the hi-fi audio signals through a stereo amplifier. A sudden surge in speaker input may cause speaker damage.
- Some speakers and televisions are specially shielded to prevent television interference. If both are of the non-shielded type, do not place the speakers adjacent to the TV set, otherwise the video playback picture may be adversely affected.

Setting The Clock


PLUG IN RECORDER
Clock display
Numeric keys
SELECT
CLOCK
TRANS

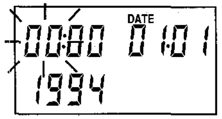
Since your video recorder bases all of its timer recording start and stop "decisions" on the time kept by its built-in clock, accurate setting of this clock is crucial for proper timer-recording results.

1. **Load batteries (☞ p.4).**

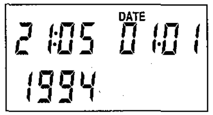

DATE
-0:00-0 1:0 1

Remote Control's LCD

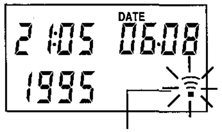
2. **Press CLOCK.**


DATE
00:00 0 1:0 1
1994

3. **Press the appropriate numeric keys to input the time.**
   - Example: For 21:05, press 2 1 0 5.

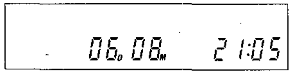

DATE
2 1:05 0 1:0 1
1994

4. **Press the appropriate numeric keys to input the day, month and year.**
   - Example: For 6th August, 1995, press 0 6 0 8 1 9 9 5.


DATE
2 1:05 06:08
1995

Transfer-ready mark

5. **Press TRANS with the remote control directed to the recorder's remote sensor window.**
   - The remote control's clock will start. At the same time, the set data will be transferred to the recorder.



Recorder's Display Panel

TO MAKE CORRECTIONS

Press SELECT button so that the item you want to change blinks. Re-input that item. Continue to step 5.

AFTER A POWER CUT

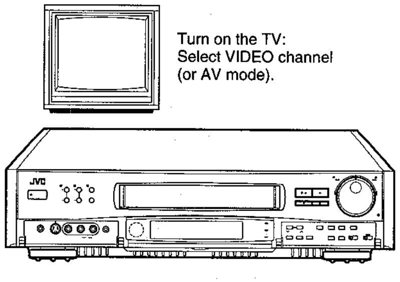
Since your video recorder has a 60-minute backup memory, it will not be affected by short power cuts. If mains power is unavailable for over 60 minutes, however, the recorder's display will reset to 0:00. In such a case, simply transfer the remote control's time to the recorder.

1. Press CLOCK three times.
2. Press TRANS with the remote control directed to the recorder's remote sensor window.

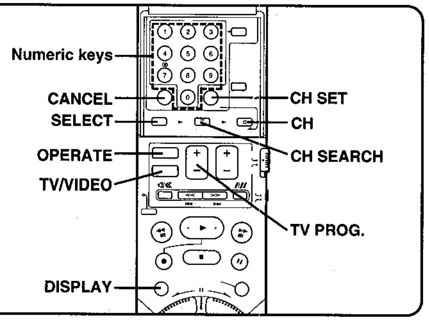
NOTES:

- If the day and month data is invalid (such as 31st April), the month digits are cleared automatically and the day digits will blink. Input again.
- If the year digits are automatically cleared in step 4, it is possible that you have input 29th February for a non-leap year. Input again.
- When the batteries are exhausted, the time display will change to "0:00" and start blinking. Replace all the batteries and set the clock again.

Setting The Tuner



Turn on the TV:
Select VIDEO channel
(or AV mode).



The procedure introduced here lets you assign receivable channels in your area to channel positions on your video recorder's tuner. Once stored, these can be accessed with the TV PROG. buttons.

1. **Press OPERATE to turn on the recorder.**
2. **Press TV/VIDEO to engage the VIDEO mode.**
3. **Press CH SET to engage the Channel Set mode.**
4. **Press CH SEARCH to start automatic scanning for receivable channels.**

1 Ch:23

Ch = Regular CC = Cable

- Automatic scanning stops when a station is detected, and the channel position will blink.
- Holding down CH SEARCH will start reverse search.
- If you don't want to store the station detected, simply press CH SEARCH to continue automatic scanning.

5. **Press SELECT to fine-tune the channel, if necessary.**
   - When the picture is clear, proceed to step 8.
6. **Press TV PROG. +/– so that the picture becomes clear.**

1 F-:23

7. **Press SELECT.**
8. **Press numeric keys or TV PROG. to select the channel position where you wish to store that TV station.**

3 Ch:23 — Colon

9. **Press CANCEL to store the station.**
   - The colon will disappear when the station is stored.
10. **Repeat steps 4 through 9 for other receivable channels.**
11. **Press DISPLAY to exit the Channel Set mode.**

TO DELETE STORED CHANNELS

Please follow the procedure described below when you wish to delete a poorly received channel.

1. Press TV PROG. to select the channel position you want to skip.
2. Press CH SET.

5 Ch 35

3. Press CANCEL.

5 Ch:35

   - The colon will appear when the station is deleted. Channel position 5 can no longer be chosen by TV PROG. buttons.
4. Press DISPLAY to exit the Channel Set mode.

TO STORE NEW CHANNELS

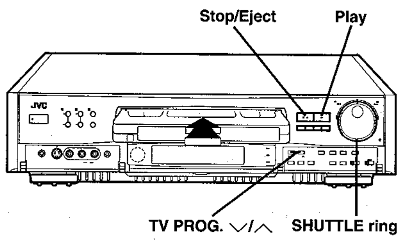
Please follow the procedure described below when you wish to add a new channel.

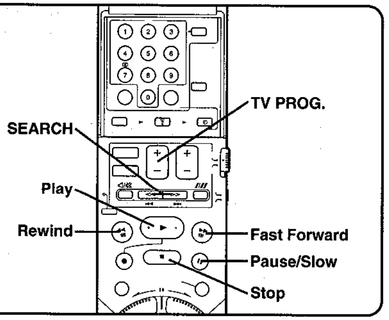
1. Press CH SET.
2. Press CH.
   - Real channel starts blinking.
3. Press CH to change the band between Ch and CC, if necessary.
4. Press numeric keys to input the number of the real channel you want to store.
5. Press numeric keys to input the number of a vacant channel position.
6. Press CANCEL to store the channel.
7. Press DISPLAY to exit the Channel Set mode.

If using a decoder, ☞ p.34

Playback

- Turn on the TV: Select VIDEO channel (or AV mode).





Basic Operations

1. **Load a cassette.**
   - The recorder power will come on automatically.
   - The counter will re-set to "0:00:00" automatically.
   - If the safety tab on the cassette is removed, playback will start automatically.
2. **Press Play to start playback.**
3. **Press Stop to stop playback.**
   - To rewind the tape, press Rewind or turn the SHUTTLE to the left and release it.
   - To fast-forward the tape, press Fast Forward or turn the SHUTTLE to the right and release it.
   - To stop rewind or fast-forward, press Stop.
4. **Press Stop/Eject on the recorder to eject the tape.**

Variable-Speed/High-Speed Search, Still Playback/Frame Advance/Slow Motion

During Playback:
- Press SEARCH << or >> for variable-speed search.
- The more times the button is pressed, the faster the playback picture will move.
- To decrease speed, press the button for the opposite direction.
- Press Fast Forward for high-speed forward search, or Rewind for high-speed reverse search.
- For short searches, keep Fast Forward or Rewind pressed for more than 2 seconds. When released, normal playback will continue.
- Press Pause/Slow to view a still picture.
- Press again to advance the picture frame by frame.
- Press Pause/Slow for 2 seconds for slow motion.

During Still:
- For slow motion playback in the forward or reverse direction, press SEARCH << or >> in the corresponding direction.
- The more times the button is pressed, the faster the playback picture will move.
- To decrease speed, press the button for the opposite direction.

Other Functions

Manual Tracking

Your video recorder is equipped with automatic tracking control. If there is picture distortion or "breaks" in the sound of Hi-Fi VHS tapes caused by mistracking, you can finely adjust tracking manually.

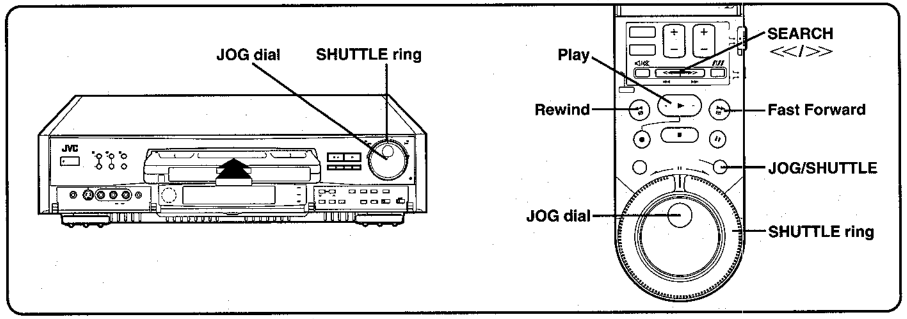
During Playback:
1. Press the recorder's TV PROG. ∨ and ∧ buttons simultaneously.
   - The AT indicator will go out.
2. Press TV PROG. ∨ or ∧ to adjust tracking.
   - Press the recorder's TV PROG. ∨ and ∧ simultaneously to return to automatic tracking.

During Slow:
1.Simply press TV PROG. ∨ or ∧ to adjust tracking.

Repeat Playback

During Playback:
1. Press Play for more than 5 seconds, and release.
   - The Play indicator (▷) on the display panel will blink slowly.
   - The tape will be played all the way to the end, 20 times automatically, and then stop.
2. To stop the tape during Repeat Playback, press Stop.

NOTES:
- The recorder automatically stops when still continues for more than 5 minutes.
- If the still picture is unstable, use the TV PROG. buttons to correct the picture.
- During search playback, some noise bars will appear.
- There is no audio during search, slow, still, or frame-by-frame playback.
- When a new tape is inserted, the recorder enters the automatic tracking mode automatically.
- When playing back LP recordings in the search, still, or frame by frame playback mode, the picture will be distorted, and there may be a loss of colour.



Other Functions (cont'd)

Jog/Shuttle Control

You can view pictures in slow to fast motion, or frame-by-frame.

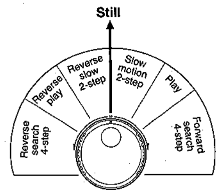
During Still or Playback:

1. Press JOG/SHUTTLE.
   - The JOG/SHUTTLE button will light.
   - Not necessary when using the recorder's JOG/SHUTTLE.
2. Turn the outer ring (SHUTTLE) in either direction. The farther the ring is rotated, the faster the search speed. Releasing the ring stops the picture in the Still mode.
   - For fast-forward with a visible picture, turn the SHUTTLE all the way to the right and release it within 1 second.
   - For rewind with a visible picture, turn the SHUTTLE all the way to the left and release it within 1 second.

During Still or Playback:

1. Press JOG/SHUTTLE.
   - The JOG/SHUTTLE button will light.
   - Not necessary when using the recorder's JOG/SHUTTLE.
2. Turn the inner dial (JOG) clockwise or counterclockwise for JOG control. The tape moves frame-by-frame at the speed with which the dial is turned, in the direction the dial is rotated.

To resume normal playback, press the Play button.



Open Search Function

Your video recorder lets you view the picture being rewound or fast-forwarded so you can easily check how far the tape has gone.

During Rewind:

1. Keep the remote's Rewind button pressed, or turn the SHUTTLE ring fully to the left.
   - The rewinding tape's picture will be visible.
2. Release the Rewind button or SHUTTLE ring to resume normal rewinding.

During Fast Forward:

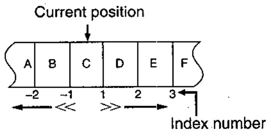
1. Keep the remote's Fast Forward button pressed, or turn the SHUTTLE ring fully to the right.
   - The fast forwarding tape's picture will be visible.
2. Release the Fast Forward button or SHUTTLE ring to resume normal fast forwarding.

Index Search

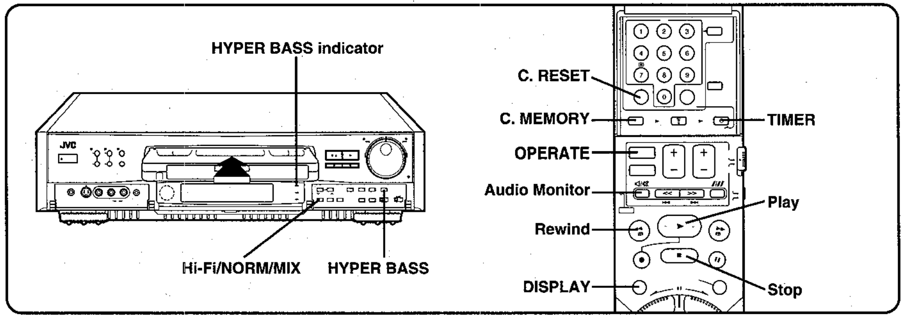
This function gives you quick access to any one of 9 index codes in either direction. Your recorder automatically marks index codes at the beginning of each recording.

During Stop:

1. Press SEARCH << or >>. "INDEX –1" or "INDEX 1" will be displayed on the display panel and search will begin in the corresponding direction.
2. If you wish to access index codes 2 through 9, press SEARCH repeatedly until the correct index number is displayed.
   Ex.: To locate the beginning of B from the current position, press SEARCH << twice.
   To locate the beginning of D from the current position, press SEARCH >> once.



- When the specified index code is found, playback will start automatically.



Counter Memory

During Playback:

1. Press DISPLAY until a counter reading appears on the display panel.
2. Press C.RESET at a point you wish to locate later.
   - The counter will read "0:00:00".
3. Press C.MEMORY.
   - The M indicator will light on the display panel.
4. When you wish to return to that point, press Stop and then Rewind.
   - The tape will rewind and stop at about "0:00:00" automatically.
5. To cancel the Counter Memory mode, press C.MEMORY again.

Next Function Memory

Your recorder can memorise what to do after rewind.

During Stop:

For automatic start of playback after the tape is rewound:

1. Press Rewind.
2. Press Play within 2 seconds.

For automatic power off after the tape is rewound:

1. Press Rewind.
2. Press OPERATE within 2 seconds.

For automatic timer standby after the tape is rewound:

1. Press Rewind.
2. Press TIMER within 2 seconds.

Soundtrack Selection

During Playback:

Your video recorder is capable of recording three soundtracks (HIFI L, HIFI R and NORM) simultaneously, and playing back the selected soundtrack.

- Pressing Audio Monitor on the remote control changes the track:

Track: (on display panel)	Use:
→ L + R ↓	for Hi-Fi stereo tapes.
L ↓	for main audio of bilingual tapes.
R	for sub audio of bilingual tapes.

- Pressing Hi-Fi/NORM/MIX on the recorder changes the mode:

Mode:	Track: (on display panel)	Use:
→ HIFI ↓	L and/or R	for Hi-Fi stereo tapes.
NORM ↓	NORM	for audio-dubbed tapes.
MIX	NORM + L and/or R	for audio-dubbed tapes.

NOTE:

- Normally use the L + R position. Then Hi-Fi stereo tapes are played back in stereo, and tapes with normal audio only are played back automatically in the NORM mode.

Hyper Bass

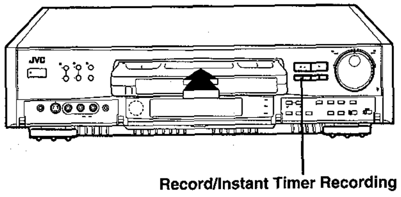
You can boost the bass sounds of music videos to make them sound more exciting.

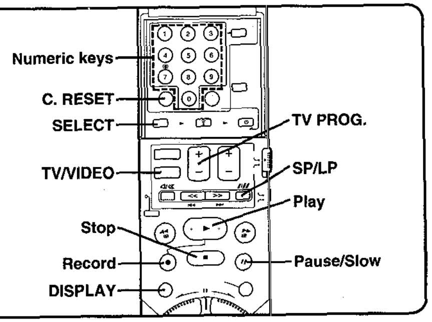
During Playback :

1. Press HYPER BASS.
   - The HYPER BASS indicator will light, and bass sounds will be boosted.
2. Press HYPER BASS again to cancel the Hyper Bass mode.

Recording

- Turn on the TV: Select VIDEO channel (or AV mode).





Basic Operations

1. **Load a cassette.**
   - The recorder power will come on automatically.
2. **Press TV/VIDEO to engage the VIDEO mode.**
3. **Press TV PROG. or the numeric keys to select the channel you wish to record.**
4. **Press SP/LP to select the tape speed.**
5. **Press Record and Play simultaneously.**
6. **Press Pause/Slow to pause recording.**
7. **Press Play to resume recording.**
8. **Press Stop to stop recording.**

NOTES:
- To start recording with the recorder's Record button, press it once on its own.
- After pause, when recording is resumed, a few frames recorded before the pause may be overlapped by the new recording. This is meant to reduce picture distortion and is not a malfunction.
- The recorder automatically stops when record-pause continues for more than 5 minutes.
- If the Record button does not work, check to see if the cassette's safety tab has been removed.
- The channel cannot be changed while recording is in progress. To change the channel, engage the record-pause mode, then change the channel.
- The recorder automatically rewinds when the end of the tape is reached during recording.
- The recorder automatically places an index code on the tape every time recording begins. For information on the Index Search function, ☞ p. 14.
- When a VPS programme is being broadcast on the selected channel, "ⓢ" mark appears on the display panel. ☞ p. 25 for information on VPS.

Other Functions

To Watch Another Programme While Recording

During Record:
1. If your recorder is connected to the TV via AV connection, press TV/VIDEO.
   - The recorder's VIDEO indicator and the TV broadcast being recorded will disappear.
2. Use the channel controls on the TV to select the other channel you wish to view.
   - The programme selected with the TV channel controls will appear on the TV screen while the one selected with the video recorder's channel controls will be recorded on the tape.
   - If a decoder is connected to the recorder (☞ p.34), you can select a scrambled channel as well with the TV channel controls.

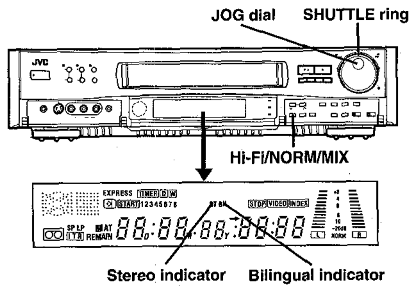
Instant Timer Recording (Off Timer)

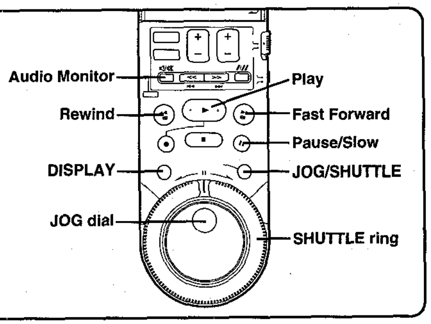
You can start a recording and then set the recorder to shut off automatically after a set duration.

During Record:
1. Press Record on the recorder. "ITR" and "0:30" indications appear, advising that power will switch off after 30 minutes.
2. Press Record again to delay the off-time by 30-minute increments (up to 4 hours).
   - For more precise setting, use the remote control's SELECT and TV PROG. buttons to set the exact time required (possible up to 8 hours and 59 minutes).

Elapsed Recording Time Indication

When you need to know the exact time of a recording.
1. Press DISPLAY until a counter reading appears on the display panel.
2. Press C.RESET before starting recording or playback.
   - The counter will be reset to "0:00:00" and show the exact elapsed time as the tape runs.





Stereo And Bilingual

Your recorder is equipped with a Sound-Multiplex decoder for reception of stereo and bilingual broadcasts.
- When a stereo programme is being received, the ST indicator lights on the display panel.
- When a bilingual programme is being received, the BIL indicator lights on the display panel.

To Record Stereo Programmes

Stereo programmes are automatically recorded in stereo on the Hi-Fi audio track (with the normal audio track recording mixed L and R channel sound). No special operation is required. Simply follow the basic recording procedure.
- To listen to the stereo soundtrack while recording, select "L+R" with Audio Monitor. ☞ p.15

NOTE:
- If the quality of stereo sound being received is poor, the ST indicator will go off, and the broadcast will be received in monaural with better quality.

To Record Bilingual Programmes

Bilingual programmes are automatically recorded in bilingual on the Hi-Fi audio track. The main soundtrack will be recorded on the normal audio track.
- To listen to the Hi-Fi soundtrack during recording, select "L" for Main, and "R" for Sub.
- To listen to the normal soundtrack, select "NORM" with the Hi-Fi/NORM/MIX button on the recorder.

Display Button

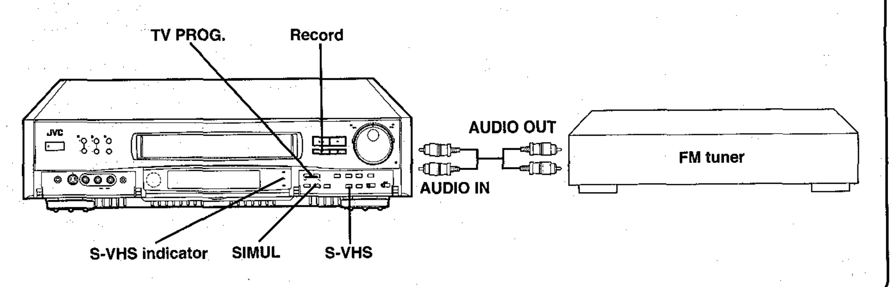
When you wish to check the remaining tape time, clock time, date, or counter reading.
1. Press DISPLAY to display the remaining tape time.
2. Press DISPLAY again to display the current clock time.
3. Press DISPLAY again to display the current date.
4. Press DISPLAY again to display the counter reading.

Retake

You can cut out unwanted parts of a TV programme while you're recording it.

During Record:
1. Press Pause/Slow.
2. Press JOG/SHUTTLE.
   - The JOG/SHUTTLE button will light.
   - Not necessary when using the recorder's JOG/SHUTTLE.
3. Turn the JOG dial or SHUTTLE ring (or press Rewind or Fast Forward) for search in the corresponding direction.
   - Release to return to Record-Pause mode.
4. Press Play when you wish to resume recording.

Recording (cont'd)



Other Functions (cont'd)

Simulcast Recording

Your recorder lets you record an audio programme while recording a TV programme. In the Simulcast mode, the TV soundtrack is recorded on the normal audio track and the external audio programme is recorded on the Hi-Fi audio track, so you can have two independent programmes. If FM simulcast TV programmes are available, record the TV programme and its FM-broadcast soundtrack simultaneously.

Preparation

- Connect the FM tuner to the rear panel AUDIO IN or front panel A (Audio) connectors.
- Set the FM tuner to the desired broadcast.

1. Press TV PROG. or the numeric key to select the TV programme you wish to record.
2. Select the Simulcast mode by pressing the SIMUL button.
   - "SC" will appear on the display panel.
3. Press the Record button to start recording.

NOTES:

- Front panel connections have priority.
- If you stop recording with the Pause/Slow button to avoid unwanted TV programme material, the audio programme is also cut.
- After finishing simulcast recording, be sure to press the SIMUL button to cancel the Simulcast mode, otherwise it is not possible to record on the Hi-Fi track from the built-in tuner.

S-VHS And VHS

Your video recorder can record in either S-VHS or VHS.

- To record in S-VHS, insert a cassette marked "S-VHS". The S-VHS indicator will light and the S-VHS recording mode is automatically selected.
- To record in VHS, insert a cassette marked "VHS". The VHS recording mode is automatically selected.
- You can also record in VHS on S-VHS cassettes. For this purpose, after inserting an S-VHS cassette, press the S-VHS button. The S-VHS indicator will go out.

Cassette	Type of recording	S-VHS indicator
S-VHS	S-VHS	On
	VHS	Off
VHS	VHS	Off

Preparation For ShowView Timer Programming

What is ShowView?

For timer-recording to take place, information such as the channel, date, start time and stop time of the programme you wish to record, must be programmed into the recorder's timer memory. The ShowView system condenses all this information into a simple ShowView code number.

Since the ShowView number contains information on the channel number, if you live in an area that uses channel numbers that are different from those listed in your TV directory, these "differences" must be input into the remote control. This process is called "Channel Mapping" (CH MAP).

CHECK THE GUIDE PROG. NUMBERS

Preparation

- Make sure you have set the clock. (☞ p. 11)
- Make sure you have set the tuner. (☞ p. 12)
- Get a TV schedule listing (magazine, newspaper, etc.) which carries ShowView code numbers.

A Find out the channel position numbers your recorder tunes to when you use the TV PROG. –/+ buttons (the positions you stored on page 12) and write them into the list.

Example: 1, 2, 3, 4, 6, 8, 10, 12

B Look through the TV listing and find out the broadcast station name of each of the channels.

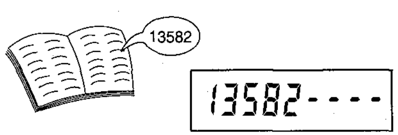
C Use the ShowView numbers to find out the GUIDE PROG. numbers for each of the stations.

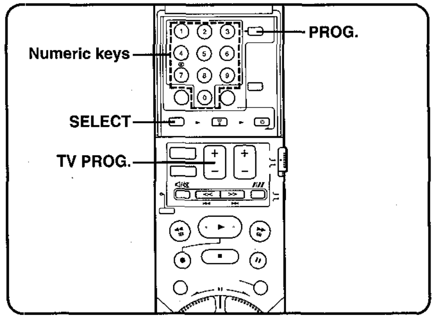
How to check:

1. **Press PROG.**

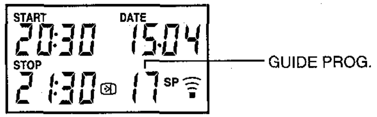
2. **Press the appropriate numeric keys to enter the ShowView number for a programme as it appears in your TV listing.**

- Make sure the ShowView number is for a programme which has not been broadcast yet.





3. **Press SELECT.**



- The number that appears as the channel number is the GUIDE PROG. number for that station. Write it into the list.

ATTENTION

- When you press the SELECT button in step 3, "Err(or)" may appear on the LCD.
  This may mean that...
  - you entered a ShowView number for a programme which has already passed.
  - the GUIDE PROG. number for that station is a 3-digit number.
- For 3-digit GUIDE PROG. numbers, refer to the GUIDE PROG. number list enclosed with this instruction manual or consult your JVC dealer.

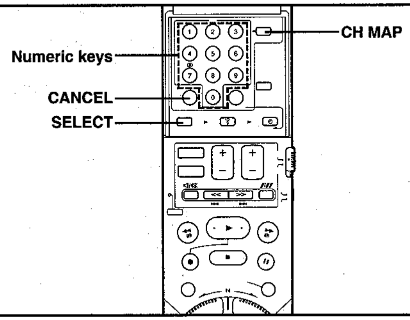
4. **Press PROG. and display the clock time.**

- Repeat steps 1– 4 and check the GUIDE PROG. number for each of the channels your recorder receives.

A Channel on your recorder (TV PROG. number)	B Station name	C GUIDE PROG. number
(ex.) 1	ARD	1
2	ZDF	2
3	WDR	17

D In cases where the channel number your recorder receives A and the GUIDE PROG. number C for that station do not match, it is necessary to make changes in the remote control's Channel Map. (continued on next page)

Preparation For ShowView Timer Programming (cont'd)


Numeric keys
CANCEL
SELECT
CH MAP

INPUT GUIDE PROG. NUMBERS INTO REMOTE

1. Press CH MAP until the Channel Map display (below) appears in the remote control's LCD.

GUIDE PROG.
TV PROG.
- - -
- -

2. Press the appropriate numeric keys to enter the GUIDE PROG. number (C column in your list).
Ex.: For "1", press
0, 0, 1.
For "10", press
0, 1, 0.

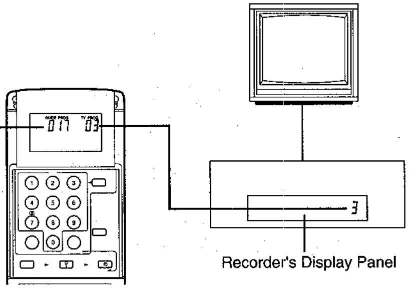
GUIDE PROG.
TV PROG.
017
-

3. Press the appropriate numeric keys to enter the channel number your recorder receives that station on. (TV PROG. number, A column in your list.)
Ex.: For "3",
press 0, 3.

GUIDE PROG.
TV PROG.
017
03

4. Press SELECT.
- To input other channels into the Channel Map, repeat steps 2 – 4 above.

5. Press CH MAP and display the clock time.


017 03
3
Recorder's Display Panel

Ex.: From column C in the list:
The GUIDE PROG. number for WDR is "17".
From column A in the list:
The TV PROG. number for WDR is "3".

TO CHECK/CANCEL GUIDE PROG. NUMBERS IN THE REMOTE

1. Press CH MAP until the Channel Map display (below) appears in the remote control's LCD.

GUIDE PROG.
TV PROG.
- - -
- -

2. Press SELECT until the GUIDE PROG. number you wish to check or cancel is displayed.

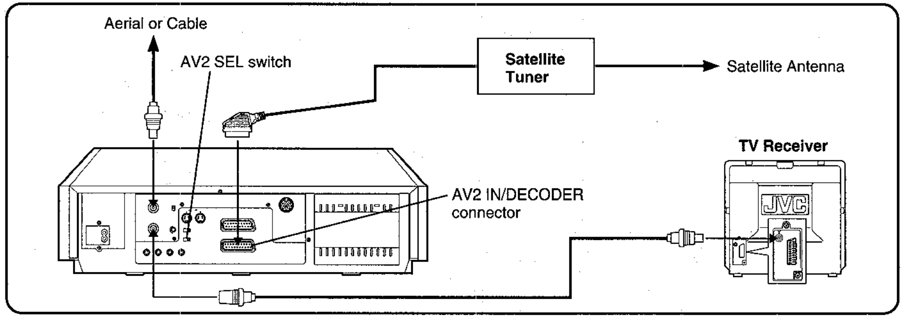
GUIDE PROG.
TV PROG.
017
03

To Cancel:

3. Press CANCEL.
4. Press CH MAP and display the clock time.

NOTES:

- When you move to another area, be sure to make changes in the Channel Map as necessary.
- When the remote control's batteries are replaced, the time or Guide Channel numbers you have set may be erased. If this happens, reset them again.


Aerial or Cable
AV2 SEL switch
Satellite Tuner
Satellite Antenna
TV Receiver
AV2 IN/DECODER connector
JVC

TO RECORD SATELLITE PROGRAMMES

Timer programming is also possible for programmes received via satellite tuner.

Preparation

1. Connect the satellite tuner as illustrated to the AV2 IN/DECODER connector.
- Make sure the AV2 SEL switch is set to "AV2 IN".

2. Press CH MAP until the Channel Map display (below) appears in the remote control's LCD.

GUIDE PROG.
TV PROG.
- - -
- -

3. Press the appropriate numeric keys to enter the GUIDE PROG. and TV PROG. numbers as follows:
- For GUIDE PROG., enter the GUIDE PROG. numbers of the satellite stations that are receivable through your satellite tuner.
- For TV PROG., always enter "00". When "00" is entered, "AU" will appear in the LCD.

GUIDE PROG.
TV PROG.
116
AU

4. Press SELECT.
- To input other satellite stations into the Channel Map, repeat steps 3 – 4 above.

5. Press CH MAP and display the clock time.

Operation

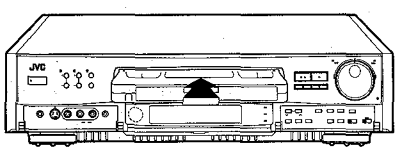
1. Turn on the satellite tuner and select the channel you wish to record.
2. Turn on the recorder and select the AU 2 mode with the AV/S SELECT button (☞ p.31).
3. Enter the ShowView number in the same way as shown in steps 1 – 7 of ShowView Timer Programming on p.22.

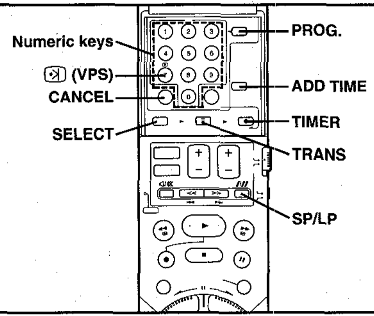
NOTE:

- After selecting the programme you wish to record from your satellite tuner, set the system's timer. If your satellite tuner does not have a timer, leave it switched on.

Timer-Recording

— ShowView Timer Programming—





The built-in ShowView programming system greatly simplifies timer programming because you won't have to enter all the data that is usually necessary (such as date, start and stop time, and channel).

Preparation

Make sure you have set the GUIDE PROG. numbers (☞ p.19 – 21).
Insert a cassette with the safety tab in place.
- The recorder power will come on automatically.

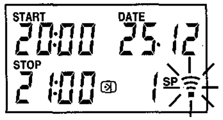
1. **Press PROG.**

- - - - - - - - -

2. **Press the appropriate numeric keys to enter the ShowView number for the TV programme you wish to record.**
   - For ShowView numbers, refer to your newspaper or TV directory.

123456789

3. **Press SELECT.**
   - The LCD will show the data for the ShowView number you just entered.
   - If the entered ShowView number is not proper, "Err" appears on the LCD. Check the ShowView number again and re-enter it.



   - Normally, you should leave "⊠" on so you can take advantage of VPS recording (☞ p.25). If you wish to cancel VPS, press ⊠ (the numeric key "7").

   WEEKLY program: After step 3, press numeric key "9".
   DAILY program: After step 3, press numeric key "8".

4. **Press SP/LP to select the tape speed.**
5. **Press TRANS with the remote control directed toward the recorder's Remote Sensor window.**
6. **Press PROG.**
   - The LCD returns to the clock display and the entered data will be automatically cleared.
   - If you need to set another program, repeat steps 1 – 6.
7. **Press TIMER.**
   - The recorder will enter the Timer mode and power will go off.

TO DELAY THE STOP TIME

After you press SELECT in step 3, press the ADD TIME button. Each time the ADD TIME button is pressed, the Stop time is delayed by 5 minutes (5 minutes of recording time is added). You can easily compensate for anticipated programme schedule delays this way.

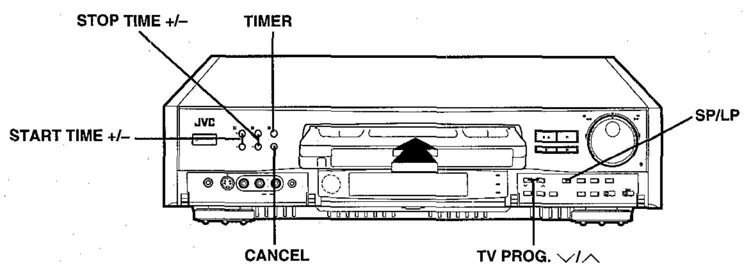
TO MAKE CORRECTIONS

- In step 2, press CANCEL to backspace and re-enter the correct ShowView number.
- After checking the data in step 3, press PROG. twice and re-enter the correct ShowView number.
- After checking the data in step 3, if you want to delay the stop time, etc. press SELECT to make the item you want to change blink, and input new data.
- Pressing PROG. clears the programmed data.

To check, cancel and replace programs, ☞ p.24

To use the recorder after setting to the Timer mode, ☞ p.24

— Express Timer —



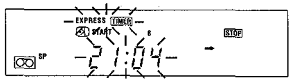
The "Express Timer" is the quick, "shortcut" method of directly programming your video recorder's timer for same-day or next-mornig recording. TV shows to be broadcast within 24 hours can be programmed for automatic recording simply by pressing three buttons (conveniently numbered) on your recorder's control panel.

TIMER PROGRAMMING IS NOT POSSIBLE UNLESS THE CLOCK HAS BEEN SET.

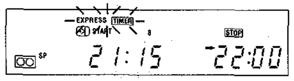
Preparation

Insert a cassette with the safety tab in place.
- The recorder power will come on automatically.
- The display panel will show the channel being received.
- To change the channel, press TV PROG.
- To change the tape speed, press SP/LP.

1. **Press START TIME +.**
   - The current time will appear on the display panel.
2. **Press START TIME +/– to set the start time.**
   - START TIME + (STOP TIME +) advances the time and START TIME – (STOP TIME –) reverses the time.
   - Press briefly to change by 1 minute. Hold the button down to change by 30-minute increments.



   - After the start time is set, the date (today or tomorrow) and channel will be displayed for 3 seconds.
3. **Press STOP TIME +.**
   - The start time will be transferred over to the stop time position.
4. **Press STOP TIME +/– to set the stop time.**



   - Normally, you should leave ⊠ on so you can take advantage of VPS recording. (☞ p.25) If you wish to cancel VPS, press ⊠ (the numeric key "7" on the remote control).
5. **Press TIMER.**
   - The recorder will enter the Timer mode and power will go off.

TO CANCEL THE PROGRAM

While timer programming, press CANCEL.
- Pressing CANCEL again disengages the Timer Program mode.

Or...
While in the Timer mode, first press TIMER to disengage the Timer mode, and press START TIME+. Then press CANCEL twice.

TO CHECK PROGRAMMED SETTINGS

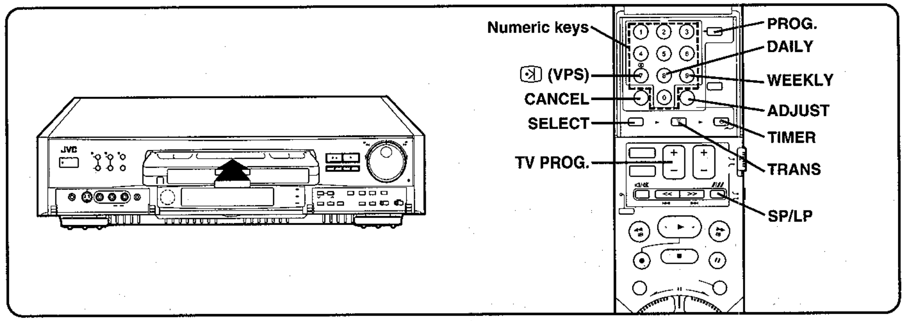
While in the Timer mode, press START TIME + to check the settings you have programmed. DO NOT press START TIME + while the Timer mode is cancelled because this will clear the programmed data for a new entry.

NOTE:
- If you are using a satellite tuner and wish to timer-record satellite programmes, before starting step 1, make sure to select the "AU 2" mode. (☞ p.31)

ATTENTION:
- If you have programmed the timer's Program 8 (via the on-screen programming facility that is available when an optional VPT (teletext) adapter is connected ☞ p.39), using the Express Timer will clear that data from Program 8 and replace it with the Express Timer data.

To use the recorder after setting to the Timer mode, ☞ p.24

Timer-Recording (cont'd) — LCD Timer Programming —



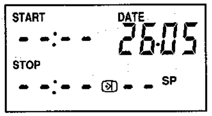
The LCD timer programming lets you input all necessary settings manually. It's helpful if the ShowView number for the TV programme you want isn't readily available.

Preparation

Insert a cassette with the safety tab in place.
- The recorder power will come on automatically.

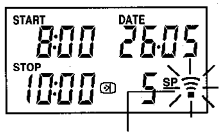
***1.* Press PROG. twice.**
***2.* Press numeric keys to input the date.**

Ex.: For 26th May, press 2 6 0 5.



***3.* Press numeric keys to input the start time, stop time and channel.**

Ex.: For 8:00, press 0 8 0 0.



WEEKLY program: After you input the channel and the transfer-ready mark appears on the LCD, press numeric key "9".

DAILY program: After you input the channel and the transfer-ready mark appears on the LCD, press numeric key "8".

- Normally, you should leave ⊠ on so you can take advantage of VPS recording. (☞ p.25) If you wish to cancel VPS, press ⊠ (the numeric key "7").

***4.* Press SP/LP to select the tape speed.**
***5.* Press TRANS with the remote control directed to the recorder's Remote Sensor window.**
***6.* Press PROG.**
- The LCD returns to the clock display and the entered data will be automatically cleared.
- If you need to set another program, repeat steps 1 – 6.

***7.* Press TIMER.**
- The recorder will enter the Timer mode and power will go off.

TO MAKE CORRECTIONS

- During steps 2 and 3, press CANCEL to backspace and input new data.
- After setting the channel in step 3, press SELECT to make the item you want to change blink, and input new data.
- Pressing PROG. clears the programmed data.

TO CHECK, CANCEL AND REPLACE PROGRAMS

To check preset programs:
1. Press ADJUST until the program settings are displayed on the display panel.
   - Program 1 is displayed with the number blinking.
2. Press SELECT to review the program contents in succession.
3. To check another program, press ADJUST again.

To cancel the program:
4. Press CANCEL.
   - You can press CANCEL at any stage while the program is open.

To replace a program:
5. Use the SELECT and TV PROG. buttons to input new data.

TO USE THE RECORDER AFTER SETTING TO THE TIMER MODE

For safety, your recorder disables all other functions while in the Timer mode.
- Press TIMER to disengage the Timer mode.
- To re-engage the Timer mode, press TIMER.

NOTE:
- If you are using a satellite tuner and wish to timer-record satellite programmes, make sure to select the "AU 2" mode with the recorder's AV/S SELECT button (☞ p.31) before step 1 and input "0" for the channel number in step 3.

Error Indications

The following error indications may appear on the recorder when you press the TIMER button to engage the Timer Standby mode. Here's why, and what you should do.

- "TIMER" and "⊡" on the display panel continue blinking.

WHY: There is no cassette in the recorder.
WHAT TO DO: Insert a cassette.

- The cassette is automatically ejected. "TIMER" and "⊡" continue blinking.

WHY: The inserted cassette has its safety tab removed.
WHAT TO DO: Insert a cassette with its safety tab intact. Or cover the safety tab hole of the cassette with adhesive tape and re-insert it. ☞ p.6.

- "TIMER" blinks for 10 seconds and the Timer Standby mode is cancelled.

WHY: There are no preset programs in memory, or they have all been incorrectly preset.
WHAT TO DO: Check the programmed data and re-program it as necessary. Press TIMER again.

Other Indications

- "TIMER" steady lit (with clock display).

WHY: The recorder is in the Timer Standby mode. This is the normal display you should see when you press the TIMER button.

- " ○ " and "TIMER" steady lit.

WHY: Normal display while timer-recording is in progress.

- The cassette was ejected, with power off and "TIMER" and "⊡" are blinking.

WHY: This means that the end of the tape was reached while timer-recording was in progress. Therefore, the preset program may not be recorded in its entirety.

- "0:00" blinking.

WHY: This means the clock must be set. It's displayed when time-keeping is terminated due to a power failure or because the recorder's power plug was pulled from the AC outlet.
WHAT TO DO: Set the clock. ☞ p.11.

- If power was interrupted, it's also likely that all preset timer programming data has been erased. Please check and re-program as necessary.

- "-- -- -- -- --" is displayed for about 5 seconds when the TRANS button is pressed.

WHY: Data was not successfully transferred. The program may have been incorrectly preset, or the recorder's clock has not been set, or all the recorder's timer programs (1 – 7) are preset.
WHAT TO DO: Check the LCD program, and re-program as necessary. Transfer the correct data. Or cancel unnecessary programs, and transfer again.

VPS Recording

Now available from some TV stations, VPS (Video Program System) is a service designed to assure safe, accurate timer-recording. With this system, special code signals are transmitted together with the audio/video signals. These code signals control your video recorder and have precedence over advertised times you preset in the timer. This means that your recorder will start and stop recording when the preset TV programmes actually start and end — even if the broadcast time of a preset TV programme is changed.

TO USE VPS SERVICE

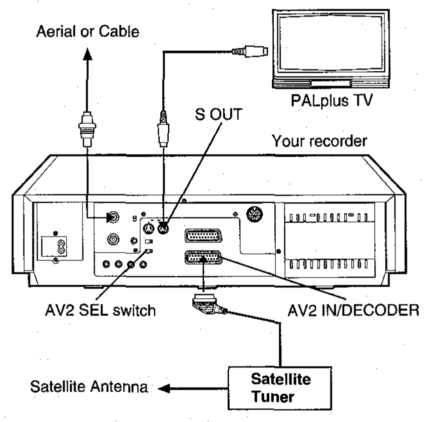
- During ShowView or LCD timer programming, make sure that "⊠" is displayed on the LCD before transferring the programme data to the recorder.
- If "⊠" is not displayed on the LCD, press the ⊠ button (the numeric key "7") to make it appear. Pressing the ⊠ button alternates the setting.

NOTES:
- When you enter programmes, set the start time (VPS time) exactly as advertised in the TV listing. A different time than advertised will result in no recording.
- VPS recording is not possible via external input.

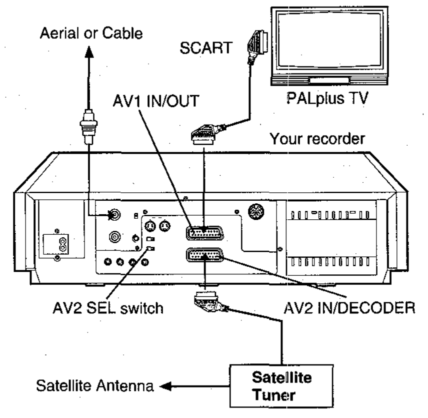
Information On Wide-Screen Viewing And Recording – PALplus –

CONNECTIONS

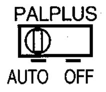
S-VIDEO CONNECTION



AV CONNECTION



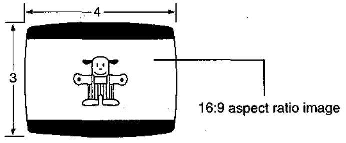
If you are using a PALplus television, leave the PALplus switch on the recorder set to the AUTO position to take full advantage of the PALplus system. If your TV is not PALplus compatible, set this switch to OFF.



What Is PALplus?

PALplus, the new high definition TV broadcast system, offers improved picture quality in wide-screen broadcasts with higher resolution. Regular PALplus broadcasts will start at VHF/UHF, cable and satellite stations.

The picture as it is transmitted by the broadcaster.



Black bands appear at the top and bottom of the picture.

PALplus Viewing and Recording

Automatic Detection

The recorder automatically detects whether or not a PALplus signal is present...

- on the channel being received,
- on the tape being played back,
- at the AV1 IN/OUT, AV2 IN/DECODER and V IN connectors.

PALPLUS Switch

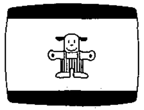
Whether the recorder's PALPLUS switch is set to AUTO or OFF, PALplus programmes being received will be output to the TV unaltered. To record and playback PALplus programmes, set the switch to AUTO.

PALPLUS Indicator

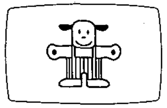
Lights when the recorder with a S-VHS cassette inserted is receiving PALplus signals.
When a PALplus signal is being received and an S-VHS cassette is not loaded, the PALPLUS indicator does not light even if a PALplus signal is received; however the received PALplus signal will be output to the TV.

What You See On The Screen

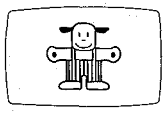
The PALplus picture viewed using this recorder will appear differently depending on the type of TV. This is what you will see on the screen.



Normal television (4:3 aspect ratio)



Wide-screen television (16:9 aspect ratio)



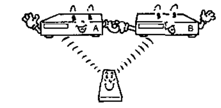
PALplus television (16:9 aspect ratio)
Since only the image portion of the picture is enlarged, a high resolution image is reproduced with full active lines of vertical resolution without any vertical or horizontal stretching.

NOTES:

- PALplus programmes can be recorded only in the S-VHS mode.
- PALplus output signals are available only with the AV1 IN/OUT and S OUT connectors.
- It is advisable to connect your TV and recorder via S-VIDEO connection for better playback picture quality.
- It is not possible to record PALplus signals via S INPUT (S IN) connector.
- When playing back a PALplus programme with high-speed search, there will be distortion at the top and bottom of the picture. This is not due to any defect of the unit.
- If a PALplus programme which is recorded with this recorder is played back on a non-PALplus recorder with a normal television, grey bars appear at the top and bottom of the screen.
- The setting of the PALPLUS switch does not affect normal PAL recording/playback.
- When a satellite tuner is connected to the AV2 IN/DECODER connector, set the AV2 SEL switch on the rear of the recorder to "AV2 IN".
- Even when the HR-S9200EG is connected to a PALplus TV, full PALplus quality may not be available depending on the TV.
- Refer to the instruction manual of the corresponding equipment.

Other Functions

Remote A/B Code Switching



The remote control is capable of controlling two JVC video recorders independently; one set to respond to your remote control's A code control signals and another set to respond to B code control signals.
The remote control is preset to send A code signals because your video recorder is initially set to respond to A code signals. You can easily modify your video recorder to respond to B code signals.

1. Unplug the recorder's power cord from the AC outlet.
2. Set the A/B switch to B.
3. Plug the power cord back into the AC outlet. Do not use other remote controls at this stage.
4. Turn the recorder power on using the remote control's OPERATE button. The recorder will now only respond to B code signals.

NOTE:
Some TV sets may malfunction in response to the B mode. If this happens switch back to the A mode.

Child Lock Function (Locking The Recorder's Controls)

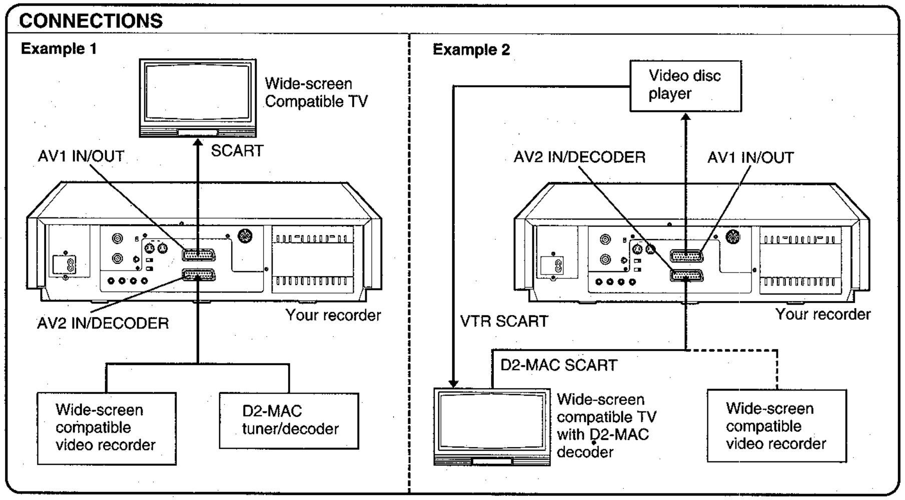
To avoid unwanted operation and prevent accidental recording...

1. Press the remote control's OPERATE button to turn the recorder's power off. Keep this button pressed for about 2 more seconds after the power LED indicator has gone off.
   - The Child Lock indicator (–) will appear on the display panel.
2. Child Lock is cancelled when you switch the recorder's power on with the remote's OPERATE button.
   - Pressing the TIMER button during timer-recording also cancels the Child Lock mode.

NOTES:

- While Child Lock is engaged, make sure you keep your remote control in a safe place inaccessible to children.
- Timer-recording is possible in the Child Lock mode. After timer-recording is done, Child Lock remains in effect.

Information On Wide-Screen Viewing And Recording – D2-MAC –


CONNECTIONS
Example 1
Wide-screen Compatible TV
AV1 IN/OUT
SCART
AV2 IN/DECODER
Your recorder
Wide-screen compatible video recorder
D2-MAC tuner/decoder
Example 2
Video disc player
AV2 IN/DECODER
AV1 IN/OUT
VTR SCART
Your recorder
D2-MAC SCART
Wide-screen compatible TV with D2-MAC decoder
Wide-screen compatible video recorder

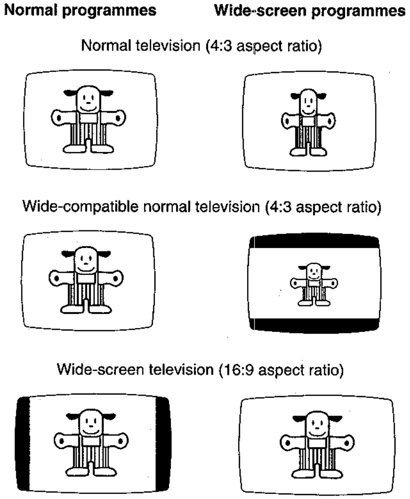
Wide-Screen Viewing And Recording

If your television is compatible with the 16:9 wide-screen format, please read this page to take full advantage of this recorder's Auto 16:9 function.

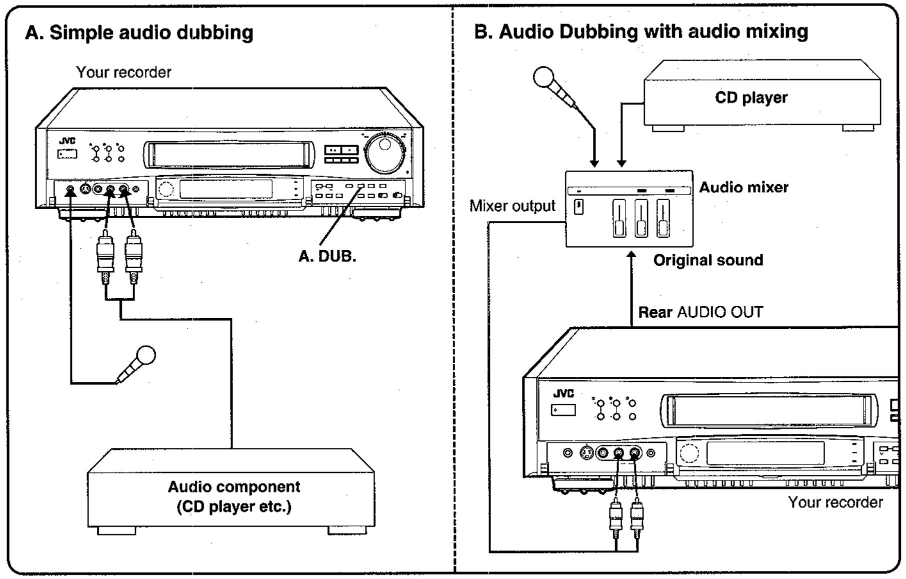
Your recorder will automatically:
- record wide-screen programmes as "wide" and normal programmes as "normal".
- play back wide-screen programmes as "wide" and normal programmes as "normal".
- control the television (if equipped with Auto Aspect Ratio Switching function) so that both types of programmes are displayed with the right proportions.

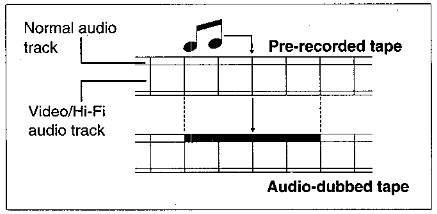
NOTES:
- When using the Auto 16:9 function, press TV/VIDEO to make the VIDEO indicator disappear from the display panel.
- When connecting a wide-screen compatible TV to the AV2 IN/DECODER connector, set the AV2 SEL switch on the rear of the recorder to "AV2 IN".
- For the recorder to control the television, it must be connected to the TV via the AV1 IN/OUT connector.
- For the recorder to record in the correct mode automatically, the signal must be applied to either the AV1 IN/OUT or AV2 IN/DECODER connector.
- When playing back wide-screen programmes via the S OUT connector, switch the television to the 16:9 mode manually.

What You See On The Screen


Normal programmes
Wide-screen programmes
Normal television (4:3 aspect ratio)
Wide-compatible normal television (4:3 aspect ratio)
Wide-screen television (16:9 aspect ratio)

Audio Dubbing


A. Simple audio dubbing
Your recorder
A. DUB.
Audio component (CD player etc.)
B. Audio Dubbing with audio mixing
CD player
Audio mixer
Mixer output
Original sound
Rear AUDIO OUT
Your recorder


Normal audio track
Pre-recorded tape
Video/Hi-Fi audio track
Audio-dubbed tape

Audio dubbing replaces the normal audio sound of a previously recorded tape with a new soundtrack.

Preparation

Connect an audio component to the recorder's front panel A(Audio) L, R connectors. (For monaural equipment, use the L connector.)

Operation

A. Simple audio dubbing

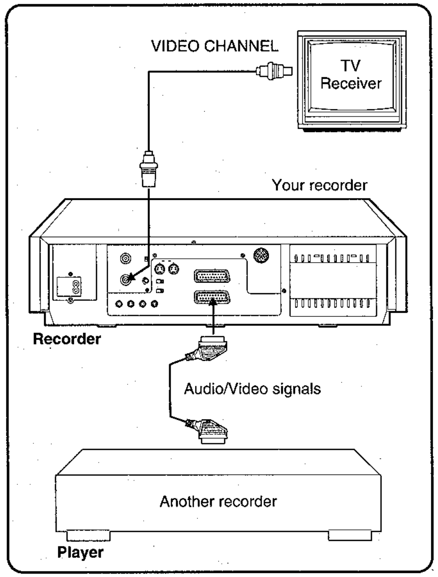
1. Select the recorder's external input mode by pressing numeric key "0". "F-AU" will appear instead of a preset number.
2. Start playback and engage the Still mode at the point from which you wish to start audio dubbing.
3. Press A. DUB.
4. Start playback of the audio source, and then press Play.
   - Audio dubbing will start.
5. Press Pause/Slow to stop audio dubbing temporarily.
6. Press Stop to stop audio dubbing.

B. Audio Dubbing with audio mixing

Perform the same procedure as described on the left, however, when the recorder is in the Audio Dubbing Pause mode in step 3, be sure to select the L+R position by pressing the Hi-Fi/NORM/MIX button.
This operation is not possible without an audio mixer nor with a monaural tape.

NOTES:
- When monitoring the sound during Audio Dubbing, the normal soundtrack will be automatically selected. If you wish to hear the mixed sound (Hi-Fi + normal soundtracks), press the Hi-Fi/NORM/MIX button to select the MIX mode. ☞ p.15.
- Audio dubbing will stop automatically at the counter reading of "0:00:00", and the recorder will enter the Play mode. Check the counter before starting audio dubbing.
- Audio dubbing is also possible with input via the rear panel AUDIO IN, AV1 IN/OUT or AV2 IN. In these cases, select the appropriate input mode. ☞ p.31
- Connections made to the front panel V(Video) and A(Audio) input automatically override the rear panel AV input connection.
- If you wish to use microphone input for audio dubbing, connect a microphone to the MIC jack. If other audio equipment is also connected to the recorder's other input connectors, both sounds will be mixed.
- If howling occurs when using the microphone, move it away from the TV or reduce the TV sound volume.
- Audio dubbing is not possible with cassettes whose safety tab has been removed.
- When playing back an audio-dubbed tape, press the Hi-Fi/NORM/MIX button to select the soundtrack you wish to hear. (☞ p.15)

Editing



Editing From Another Recorder

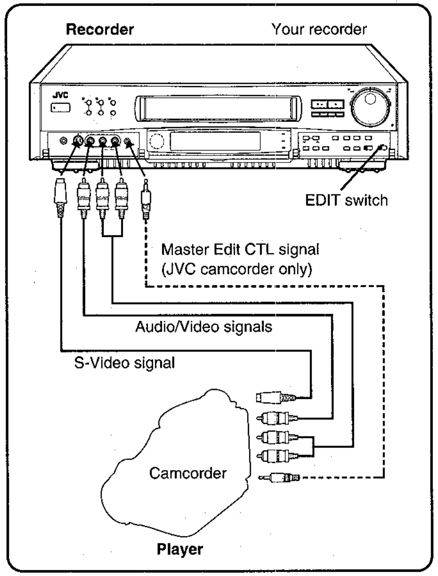
Preparation

- Connect another video recorder to your recorder.
- Engage the external input mode.
  - To select the input connectors and the corresponding external input mode, ☞ p. 31.
- Set the EDIT switch to ON.

1. Load the source tape in the player, and the recording tape in your recorder.
2. Select the recording speed (SP or LP).
3. Put your recorder in the Record-Pause mode.
4. Play back the source tape to search for scene to be edited.
5. Press the recorder's Play button where you want to start editing.
6. Press the recorder's Pause button to stop editing.
7. Repeat steps 4 through 6 to continue editing.

NOTE:

- To minimize picture degradation while editing, set the EDIT switch to ON. After you finish editing, be sure to set the EDIT switch back to OFF.



Editing From A Camcorder

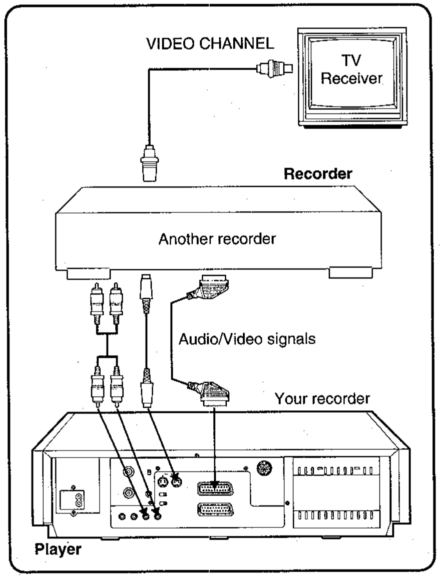
Preparation

- Connect the camcorder's AV OUT or AV/S OUT connector to the recorder's front panel V(Video) and A(Audio) connectors, or S-VHS and A(Audio) connectors.
- Connect the AV or AV/S output cable's mini-plug to the REMOTE PAUSE terminal of the recorder.
- Engage the external input mode.(☞ p.31)
- Set the EDIT switch to ON.

1. Follow steps 1 through 7 of "Editing From Another Recorder" on the left.

NOTES:

- If the camcorder is equipped with the Master Edit Control system, you can control the recorder using the camcorder's controls. See the camcorder's instruction manual for operating procedures.
- With this connection, you can also use the camcorder as a video camera for direct recording onto the recorder's tape. Put the recorder in Record-Pause and use the camcorder's start/stop trigger to start and pause recording. (For direct recording with a separate video camera, a camera adapter is necessary.)
- To minimize picture degradation while editing, set the EDIT switch to ON. After you finish editing, be sure to set the EDIT switch back to OFF.



Editing To Another Recorder

Preparation

- Connect your recorder's AV1 IN/OUT or S OUT/AUDIO OUT to the audio and video input connectors of the recording deck.
- Set EDIT switch to ON.
- Engage the recorder's AUX mode.

1. Put the recorder in the Record-Pause mode.
2. Play back the source tape to search for a scene to be edited.
3. Press both the player's and recorder's Play buttons simultaneously.
4. Press the recorder's Pause button to stop editing.
5. Repeat steps 2 through 4 to continue editing.

NOTE:

- To minimize picture degration while editing, set the EDIT switch to ON. After you finish editing, be sure to set the EDIT switch back to OFF.

Advantages Of S-VHS Video Recorders

You can edit from VHS to S-VHS, S-VHS to VHS, or, needless to say, from S-VHS to S-VHS.

- From VHS to S-VHS: Record VHS playback signals in the S-VHS mode. Although the picture quality is inherently limited by that of the original, the edited tape has better picture quality than those made by VHS-to-VHS editing.
- From S-VHS to VHS: Because the picture quality of the source material is very high, the edited tape has better picture quality than those made by VHS-to-VHS editing.
- From S-VHS to S-VHS: All signals will be transferred without degradation.

How To Select The External Input Mode

To record external audio and video signals;

1. Press the remote control's numeric key "0".
2. Press the AV/S SELECT on the front of the recorder to select the appropriate external input mode.
   - Pressing AV/S SELECT rotates the input mode as follows:

When using rear panel input connectors:

AV/S SELECT

Connector	Mode (on display panel)
AV1 IN/OUT	AU 1
AV2 IN	AU 2
S IN and AUDIO IN	[S]

When using front panel input connectors:

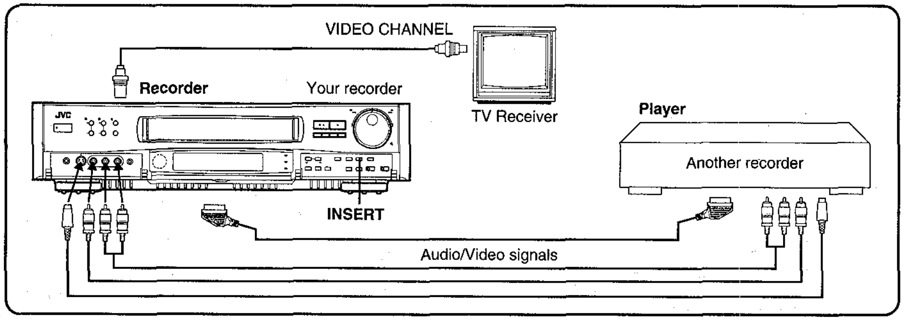
AV/S SELECT

Connector	Mode (on display panel)
S-VHS, A(Audio) L and R	F[S]
V(Video), A(Audio) L and R	F-AU

NOTES:

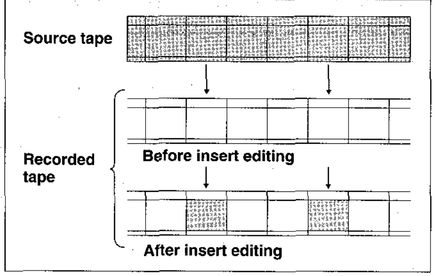
- To record input signals from the AV2 IN/DECODER connector, set the AV2 SEL switch on the rear of the recorder to AV2 IN.
- Connections made to the front panel Video and Audio inputs automatically override the rear panel AUDIO/VIDEO input connection. If you wish to edit with another machine connected to the rear input connector, make sure that there is nothing connected to the front connectors.
- Use the L connector for monaural connection.

Editing (cont'd)



Insert Editing

Insert editing replaces part of the recorded scene with new material. Both the picture and Hi-Fi audio soundtrack are replaced with new ones, while the normal audio soundtrack remains unchanged. If you wish to change the normal audio track as well, use the audio dubbing function simultaneously.



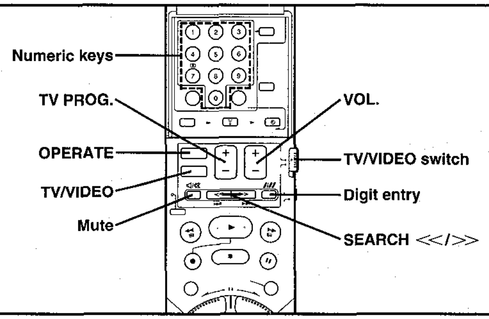
Preparation

- Connect another video recorder to the rear panel 21-pin AV1 or AV2 socket, or front panel V(Video) and A(Audio), or S-VHS and A(Audio) connectors.
- Engage the external input mode.
  - To select the input connectors and the corresponding external input mode, ☞ p. 31.

1. Load the source tape in the player, and the recording tape in your recorder.
2. Play back the recording tape and determine the edit-out point (the end of the segment to be replaced) using the Jog/Shuttle controls.
   - Releasing the Jog/Shuttle controls engages the Still mode.
3. Press C. RESET. (0:00:00)
4. Determine the edit-in point (the beginning of the segment to be replaced) using the Jog/Shuttle controls.
5. Press INSERT. (Insert-Pause mode)
   - For simultaneous replacement of the normal audio soundtrack, press A. DUB as well.
   - The TV screen changes from the still picture to the input signal you are going to record.
6. Play back the segment of the source tape to be inserted.
7. Press Play.
   - Insert editing will start. At counter 0:00:00, insert editing will stop automatically while the tape continues running in the Play mode.
   - If you wish to stop insert editing before the specified edit-out point, press C. RESET.

NOTE:
- Suitable leads can be obtained from your dealer.
- Insert editing is not possible with cassettes whose safety tab has been removed.
- Insert editing cannot be started from a non-recorded segment.
- In insert editing, the recording speed (SP/LP) is determined by the previous recording to be replaced. If the previous recording's speed changes within a single edit, the inserted picture will be distorted at the switching point.

Using The Remote Control For TV Operation



TV Code Setting

Your remote control can operate the basic functions of your TV set. In addition to JVC televisions, other manufacturers' televisions listed on the right can also be controlled by setting the remote control to "TV". If your television is a JVC (Code 1), you don't have to set the TV code in step 2.

1. Set the TV/VIDEO switch to "TV".
2. While holding down the OPERATE button, press the numeric keys corresponding to the code number for your TV's brand.
   - Press OPERATE to turn the TV power on.
   - Press TV/VIDEO to switch the TV between TV and VIDEO (or AV) mode.
   - Press TV PROG. to select the TV's channel.
   - Press VOL. to adjust the TV's sound volume.
   - Press Mute to mute the TV's sound.
3. To operate your recorder, set the TV/VIDEO switch back to "VIDEO".

NOTE:
- The TV PROG. button does not function with televisions using Code 2.
- The TV/VIDEO button does not function with televisions using Code 3.
- With some televisions, the OPERATE button functions only to turn the TV power off, and the TV/VIDEO button functions only to switch the TV to the VIDEO (AV) mode.
- Whenever you replace batteries in the remote control, it is necessary to re-set the TV code if your television is not a JVC TV.

IMPORTANT
Although the provided remote control unit is compatible with JVC televisions, as well as many TV models manufactured by others, it is possible that the provided remote control will not work with your TV, or in some instances, will have limited function capability.

CODE	TV BRAND NAME
1	JVC
2	BRANDT, NORDMENDE, SABA, TELEAVIA, TELEFUNKEN, THOMSON
3	FERGUSON
4	PHILIPS
5	BLAUPUNKT, GRUNDIG
6	SONY
7	PANASONIC
0	GRAETZ, ITT, LUXOR, SALORA, SELECO

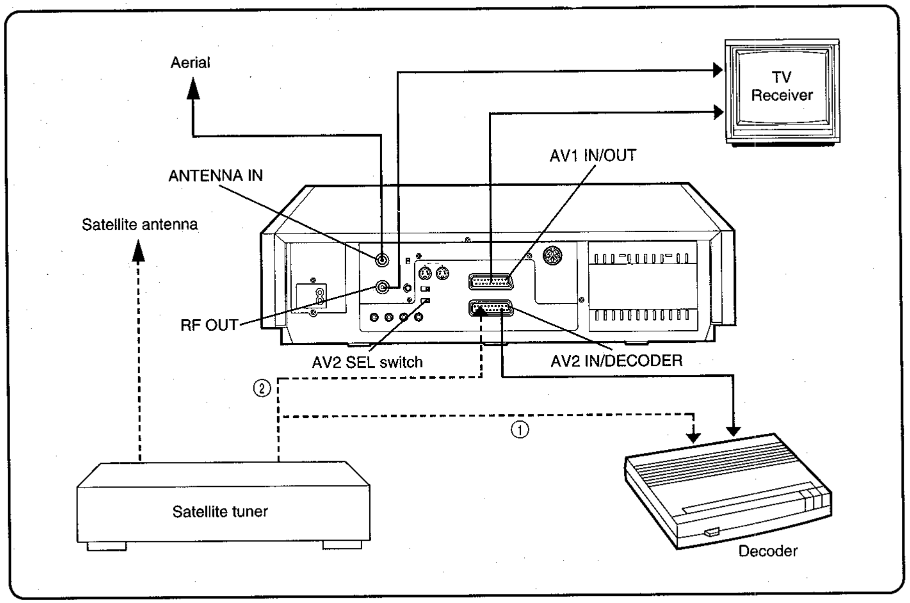
To Control Your Television With Additional Buttons

The numeric keys can also be used to select the TV's channel by setting the remote control to the TV mode.

1. Set the TV/VIDEO switch to "TV".
2. Use the numeric keys and the Digit entry button or the SEARCH <</>> buttons to select the TV's channel.
   - With televisions using Code 1, 3, 4, 6 or 7 the Digit entry button corresponds to the 1-digit/2-digit entry switching button (often labelled -/--) of your TV's remote control.
   - With televisions using Code 1, 5 or 0, the SEARCH << button corresponds to the 10 + button, and the SEARCH >> button, to the 20 + button of your TV's remote control.

NOTE:
The way these buttons are used is determined by your TV. Use these buttons as instructed for your TV's remote control.

Information On Scrambled Broadcast



CONNECTIONS

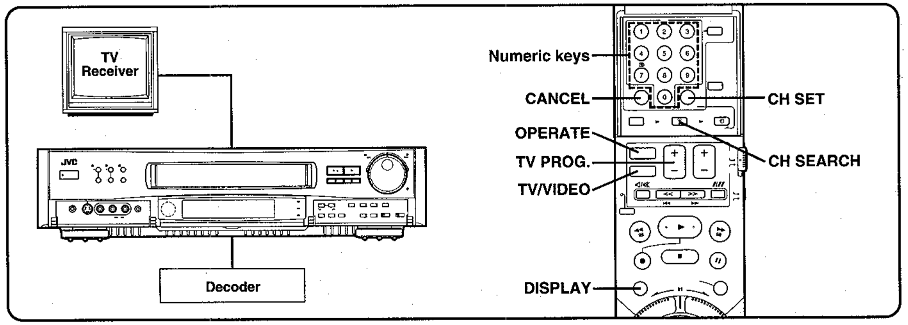
The AV2 IN/DECODER connector can be used as an input terminal for an external decoder. Simply connect a decoder and you can enjoy the variety of programming that is available through scrambled channels.

1. Connect your recorder and TV via their AV connectors (☞ p. 7, AV CONNECTION).
2. Set the AV2 SEL switch on the recorder's rear panel to "DECODER".
3. Connect your recorder's AV2 IN/DECODER connector to the decoder's Euroconnector using a 21-pin SCART cable.
4. Set the tuner to receive scrambled channels (☞ p. 35, TUNING IN SCRAMBLED CHANNELS).

NOTES:

When connecting a satellite tuner...

- Connect the satellite tuner to the decoder ①, or if you don't have a decoder connect the satellite tuner directly to the vieo recorder ②.
- Set the AV2 SEL switch on the rear panel to "AV2 IN".
- To view a programme via the satellite tuner, select AU 2 mode by pressing numeric key "0" and then AV/S SELECT until "AU 2" appears on the display panel.

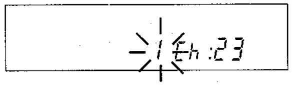


TUNING IN SCRAMBLED CHANNELS

Preparation

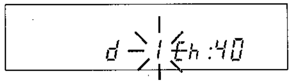
- Turn on the TV.
- Select VIDEO channel (or AV mode).

1. **Press OPERATE to turn on the recorder.**
2. **Press TV/VIDEO so that the VIDEO indicator is lit on the display panel.**
3. **Press CH SET.**
4. **Press CH SEARCH to start automatic scanning for receivable channels.**



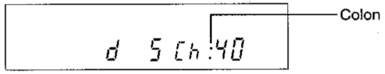
- Automatic scanning stops when a broadcast is detected.
- If the detected broadcast is not a scrambled broadcast, press CH SEARCH and continue search until a scrambled broadcast is found.

5. **Press TV/VIDEO when a scrambled broadcast is detected.**



- The programme will be descrambled. For normal (non-scrambled) broadcasts, do not press TV/VIDEO.

6. **Press numeric keys or TV PROG. to select the channel position where you wish to store that scrambled broadcast.**



7. **Press CANCEL to store the channel.**
   - The colon will disappear when the scrambled broadcast is stored.
8. **Press DISPLAY to disengage the Channel Set mode.**

WATCHING SCRAMBLED PROGRAMMES

Preparation

- Turn on the TV.
- Select VIDEO channel (or AV mode).

1. Press TV/VIDEO to select the VIDEO mode.
2. Choose a scrambled channel using the Numeric keys or TV PROG. just as you would with regular stations.

Watching One Programme While Recording Another

To watch a regular TV programme while recording a scrambled programme:

- Press the TV PROGRAM button on the TV's remote control and select the channel you want to watch.
- To watch the scrambled programme that is being recorded, press TV/VIDEO and select the VIDEO mode.

To watch a scrambled TV programme while recording a regular programme:

- Press the TV PROGRAM button on the TV's remote control and select the scrambled channel. After displaying a scrambled picture for a few seconds, the programme will become descrambled and a viewable picture will appear on the TV screen.

NOTE:

- When you watch a scrambled programme with the decoder connected to the recorder, you don't have to turn on the recorder. However, the recorder's OPERATE indicator will light while the scrambled channel is selected on your TV.

In Case Of Difficulty

POWER AND TAPE TRANSPORT PROBLEMS

Symptoms	Check points
No power is applied to the recorder.	■ Is the power cord disconnected? — Connect it.
Clock is functioning properly, but the recorder cannot be powered.	■ Is "TIMER" displayed on the display panel? — Press the TIMER button to extinguish the display.
Tape stops during rewind or fast-forward.	■ Is the C. MEMORY button pressed? — Press again to make "M" disappear from the display panel.

RECORDING PROBLEMS

Symptoms	Check points
Recording cannot be started.	■ Is a cassette loaded? ■ Is the safety tab on the cassette removed? — Reseal the slot with adhesive tape.
TV broadcasts cannot be recorded.	■ Has "external input" been selected? — Set to the desired channel.
Tape-to-tape editing or camera recording is not possible.	■ Is the camcorder or another video recorder correctly connected? ■ Are all necessary power switches turned ON? ■ Has "external input" been selected? — Set to the correct input mode. (☞ p.31).
Timer recording is not possible.	■ Have you set the clock correctly and programmed the timer correctly? — Check once again. ■ Is "TIMER" displayed on the display panel? — If not, press the TIMER button to display "TIMER".
ShowView timer recording is not possible, or cannot be done correctly.	■ Have you set GUIDE PROG. numbers into the remote control correctly? (☞ p. 19, 20) ■ Did you enter the correct ShowView number for that programme? (☞ p.22)
Satellite programmes are not correctly timer-recorded.	■ Have you connected the satellite tuner to the recorder's AV2 IN/DECODER connector? — If not, make this connection. (☞ p 21) ■ Have you selected "AU 2" as the channel? — Make sure "AU 2" is selected as the recording channel. (☞ p 24)

PLAYBACK PROBLEMS

Symptoms	Check points
Playback picture does not appear while the tape is running.	■ If you are using RF OUT connection, is the TV receiver's channel selector set to the correct video channel? — Set it to the RF converter channel (UHF 36). (☞ p. 9) ■ If you are using AV connection, is the TV receiver set to the AV mode? — Set it to the AV mode.
Noise appears during visual search.	■ This is normal.
Noise appears during normal or slow motion playback.	■ Is the automatic tracking mode engaged? — Try manual tracking. (☞ p. 13)
Playback picture is blurred or interrupted while TV broadcasts are clear.	■ Video heads may be dirty. — Head cleaning is necessary. Consult your JVC dealer. (☞ p.37)

Hi-Fi AUDIO PROBLEMS

Symptoms	Check points
TV sound cannot be recorded on Hi-Fi audio track.	■ Has the SIMUL button been pressed? — If "SC" appears on the display panel, cancel the Simulcast mode by pressing SIMUL button.
Breaks are noticeable in Hi-Fi audio reproduction.	■ Is the automatic tracking mode engaged? — Try manual tracking. (☞ p.13)

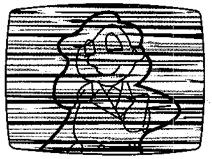
OTHERS

Symptoms	Check points
Whistling or howling is heard from TV during camera recording.	■ Move camcorder or camera's microphone away from TV or reduce TV sound volume.
Channel cannot be switched.	■ Is recording in progress? — Press the Pause/Slow button, change the channel, and press the Play button.
Remote control does not function.	■ Are the batteries discharged? — Replace with new ones. ■ Is the A/B code switch set to the appropriate position? ■ Is the TV/VIDEO code switch to the appropriate position? — Check once again.

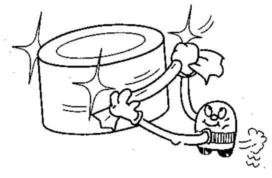
ATTENTION:
This recorder contains microcomputers. External electronic noise or interference could cause malfunctioning. In such cases, switch the power off and unplug the power cord. Then plug it in again and switch on. Take out the cassette. After checking the cassette, operate the unit as usual.

Special Note on Head Cleaning

Accumulation of dirt and other particles on the video heads may cause the playback picture to become blurred or interrupted. Although this model is equipped with a built-in head cleaner which automatically cleans the heads, reducing the likelihood of dirty heads, if such troubles are encountered please consult the nearest JVC dealer.



Auto Head Cleaner



A built-in head cleaner automatically cleans the video heads and head drum whenever a tape is loaded or unloaded to reduce head clogging.

Precautions

Please follow these safety precautions. Not doing so may result in damage to the recorder, remote control, or video cassette.

- **Avoid extreme heat and direct sunlight.**
- **Avoid extreme cold.**
- **Avoid extreme humidity.**
- **Avoid dust.**
- **Avoid places subject to vibrations.**
- **Avoid strong magnetic fields.**
- **Do not block the recorder's ventilation openings.**
- **Do not place anything heavy on the recorder or remote control.**
- **Do not place anything which might spill on top of the recorder or remote control.**
- **Do not place the recorder on cushions, pillows, or thick carpeting.**
- **Use the recorder in a stable, horizontal position only.**

Beware of moisture condensation

Moisture in the air will condense on the recorder when you move it from a cold place to a warm place, or under extremely humid conditions — just as water droplets form on the surface of a glass filled with cold liquid. Moisture condensation on the head drum will cause damage to the tape. In conditions where condensation may occur, keep the recorder's power turned on for a few hours to let the moisture dry.

When transporting

- ■ Be sure to remove cassette from recorder before packing.
- ■ Avoid violent shocks to the recorder during packing and transport.

Place cassettes in cassette cases and store vertically.

Specifications

GENERAL

Power requirement	: AC 220 – 240 V∿, 50/60 Hz
Power consumption	: 34 W
Temperature	
Operating	: 5°C to 40°C
Storage	: –20°C to 60°C
Dimensions (WxHxD)	: 459 x 109 x 387 mm
Weight	: 6.6 kg
Format	: S-VHS/VHS PAL standard
Maximum recording time (SP)	: 240 min. with E-240 video cassette
(LP)	: 480 min. with E-240 video cassette

VIDEO/AUDIO

Signal system	: PAL-type colour signal and CCIR monochrome signal, 625 lines/50 fields
Recording system	: Rotary two-head helical scan system with slant double-azimuth combination video heads
Signal-to-noise ratio	: 43 dB
Horizontal resolution	: 250 lines (VHS) 400 lines (S-VHS)
Frequency range	: 70 Hz to 10,000 Hz (Normal audio) 20 Hz to 20,000 Hz (Hi-Fi audio)
Input/Output	: 21-pin scart connectors (IN/OUT x 1, IN/DECODER x 1) : RCA connectors (VIDEO IN x 1, AUDIO IN x 2, AUDIO OUT x 1) : S connectors (IN x 2, OUT x 1) : Microphone jack x 1

TUNER/TIMER

Channel coverage	: VHF 47 – 89/104 – 300/ 302 – 470 MHz UHF 470 – 862 MHz
Aerial output	: UHF channel 36 (Adjustable 32 – 40)
Memory backup time	: 60 min.

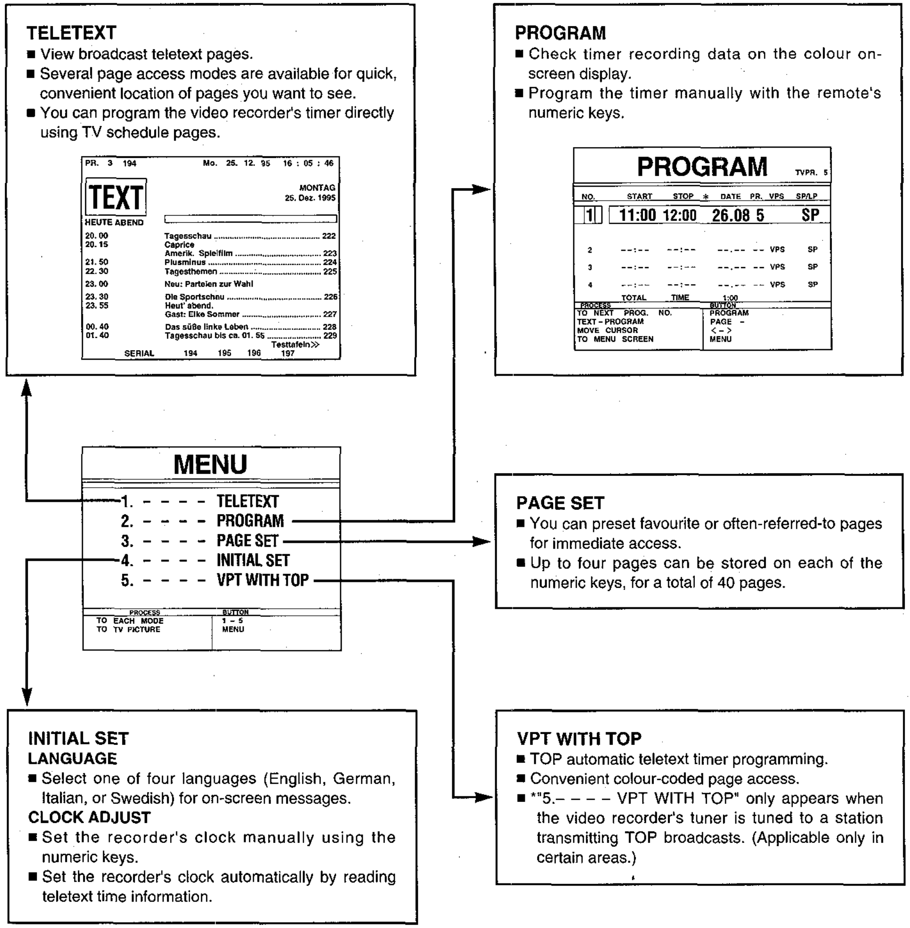
ACCESSORIES

Provided accessories	: Aerial cable, Infrared remote control unit, "R6" battery x 2, AC power cord, Audio cable, S-Video cable
Optional accessory	: VPT adapter VU-V142E

Specifications shown are for SP mode unless otherwise specified.
Design and specifications subject to change without notice.

Using The Optional Teletext Adapter

Teletext services have established themselves as one of the most flexible sources of information and broadcast schedules available to TV and video users. Your video recorder is ready to take full advantage of these services. By connecting an optional teletext adapter (☞ Specifications), you'll not only be able to view the vast number of teletext pages now available, you'll be able to transfer broadcast schedule data directly to your recorder's timer for instant, automatic timer programming. You'll also be able to make full use of your remote control's capabilities, with all the dual or triple function controls working as intended. Here are just a few examples of features available to you when you connect an optional teletext adapter.



TELETEXT
- ■ View broadcast teletext pages.
- ■ Several page access modes are available for quick, convenient location of pages you want to see.
- ■ You can program the video recorder's timer directly using TV schedule pages.

PR. 3 194 Mo. 25. 12. 95 16 : 05 : 46

TEXT

MONTAG
25. Dez. 1995

HEUTE ABEND

20. 00	Tagesschau	222
20. 15	Caprice	
	Amerik. Spielfilm	223
21. 50	Plusminus	224
22. 30	Tagesthemen	225
23. 00	Neu: Parteien zur Wahl	
23. 30	Die Sportschau	226
23. 55	Heut' abend.	
	Gast: Elke Sommer	227
00. 40	Das süße linke Leben	228
01. 40	Tagesschau bis ca. 01. 55	229

Testtafeln>>

SERIAL 194 195 196 197

PROGRAM
- ■ Check timer recording data on the colour on-screen display.
- ■ Program the timer manually with the remote's numeric keys.

PROGRAM TVPR. 5

NO.	START	STOP	*	DATE	PR.	VPS	SP/LP
1	11:00	12:00		26.08	5		SP
2	--:--	--:--		--.--	--	VPS	SP
3	--:--	--:--		--.--	--	VPS	SP
4	--:--	--:--		--.--	--	VPS	SP

TOTAL TIME 1:00

PROCESS	BUTTON
TO NEXT PROG. NO.	PROGRAM
TEXT – PROGRAM	PAGE –
MOVE CURSOR	< – >
TO MENU SCREEN	MENU

MENU

1. - - - - TELETEXT
2. - - - - PROGRAM
3. - - - - PAGE SET
4. - - - - INITIAL SET
5. - - - - VPT WITH TOP

PROCESS	BUTTON
TO EACH MODE	1 – 5
TO TV PICTURE	MENU

PAGE SET
- ■ You can preset favourite or often-referred-to pages for immediate access.
- ■ Up to four pages can be stored on each of the numeric keys, for a total of 40 pages.

INITIAL SET

LANGUAGE
- ■ Select one of four languages (English, German, Italian, or Swedish) for on-screen messages.

CLOCK ADJUST
- ■ Set the recorder's clock manually using the numeric keys.
- ■ Set the recorder's clock automatically by reading teletext time information.

VPT WITH TOP
- ■ TOP automatic teletext timer programming.
- ■ Convenient colour-coded page access.
- ■ *"5.– – – – VPT WITH TOP" only appears when the video recorder's tuner is tuned to a station transmitting TOP broadcasts. (Applicable only in certain areas.)

SECTION 1
DISASSEMBLY

1.1 DISASSEMBLY

1.1.1 Top cover

1. Take out four screws Ⓐ.
2. Slide the side panels (L) and (R) in directions ① and ②, and remove them.
3. Take out one screw Ⓑ.
4. Tilt up the rear end of the top cover in direction ③, then remove the top cover.

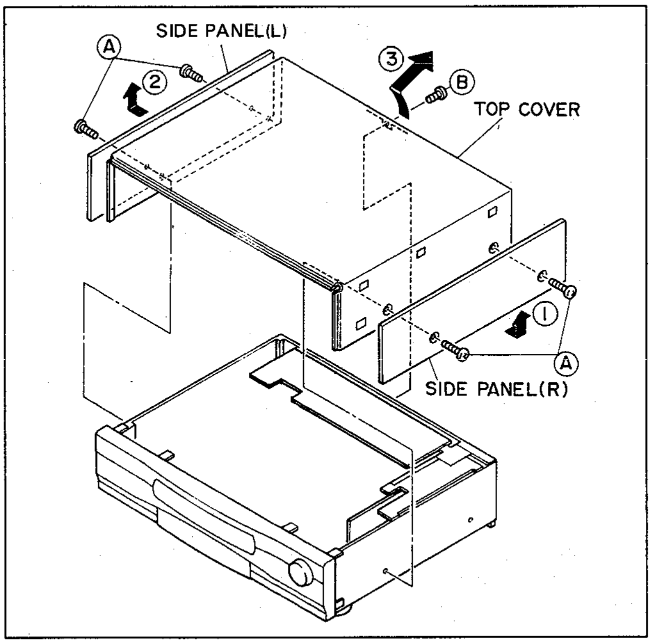

SIDE PANEL(L)
Ⓐ
②
③
Ⓑ
TOP COVER
①
Ⓐ
SIDE PANEL(R)

Fig. 1-1 Top cover

1.1.2 Front panel assembly

1. Remove the top cover.
2. Carefully disengage four tabs ⓐ of the panel assembly from the upper side of the chassis in direction ①.
3. Disengage two tabs ⓑ of the both side of front panel assembly and disengage three tabs ⓒ from bottom of the chassis.
4. Disconnect one connector ⓓ and pull the front panel assembly to forward direction.

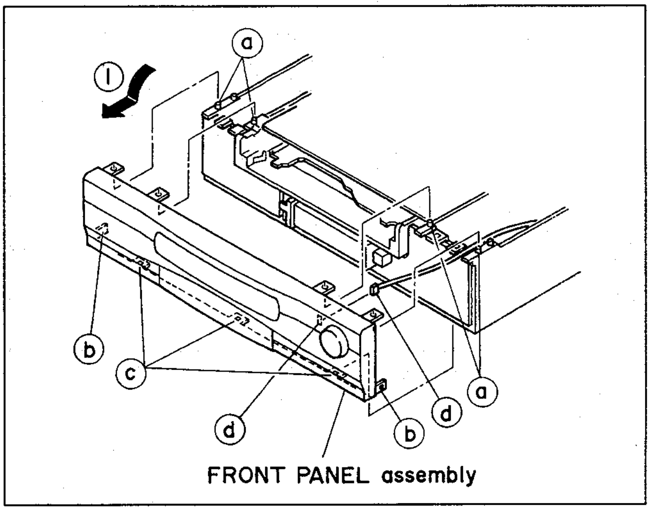

ⓐ
①
ⓑ
ⓒ
ⓓ
ⓑ
ⓓ
ⓐ
FRONT PANEL assembly

Fig. 1-2A Front panel assembly

Note:*Install the front panel assembly as shown in Fig. 1-2B and reengage the tabs.*
Supply power and use a spare cassette to check for normal loading and eject operations.

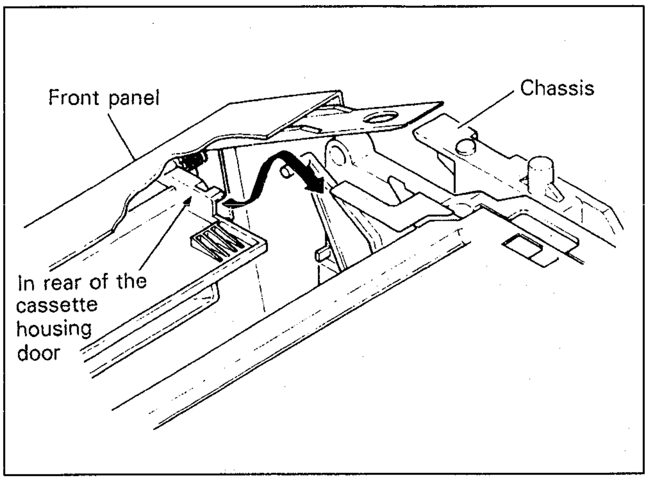

Front panel
Chassis
In rear of the cassette housing door

Fig. 1-2B Cassette housing door

1.1.3 Bottom cover

1. Remove the top cover.
2. Take out two screws Ⓒ.
3. Disengage three tabs ⓐ, slide the bottom cover in direction ① and remove the bottom cover and two earth plates.

Note:*Install the bottom cover, set two earth plates and reengage three tabs ⓐ, then tighten two screws Ⓒ.*

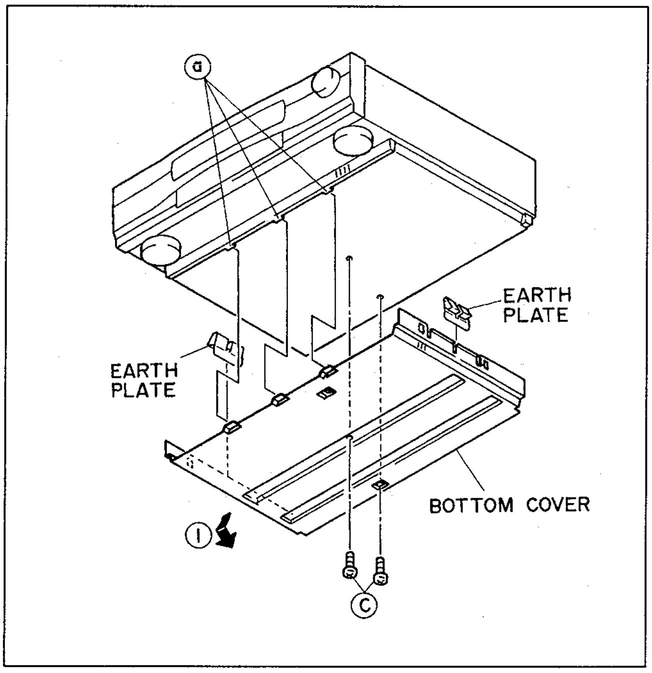

ⓐ
EARTH PLATE
EARTH PLATE
BOTTOM COVER
①
Ⓒ

Fig. 1-3 Bottom cover

1.1.4 TU/DEM/P/V board assembly

1. Remove the top cover.
2. Take out four screws Ⓓ.
3. Take out five screws Ⓔ and tilt up the TU/DEM/P/V board assembly in direction ① and remove it.

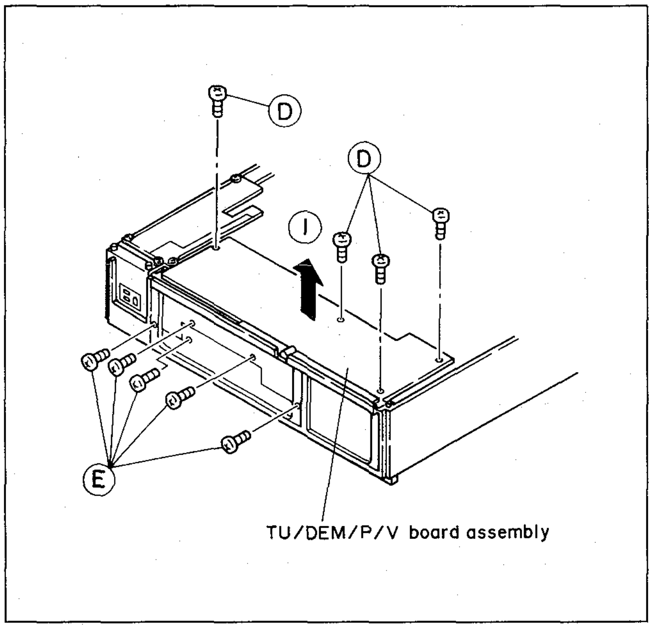

D
D
I
E
TU/DEM/P/V board assembly

Fig. 1-4A TU/DEM/P/V board assembly-1

4. For check and repairs, set up the TU/DEM/P/V board assembly to rear of chassis at ⓐ positions as shown in Fig. 1-4B.

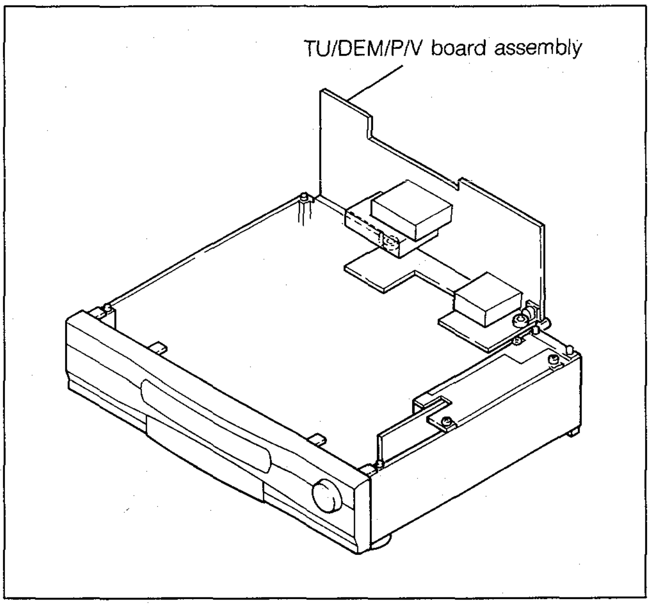

TU/DEM/P/V board assembly

Fig. 1-4B TU/DEM/P/V board assembly-2

1.1.5 SWITCHING REGULATOR board assembly

1. Remove the top cover.
2. Take out four screws Ⓕ, tilt up the SWITCHING REGULATOR board assembly in direction ① and remove it.

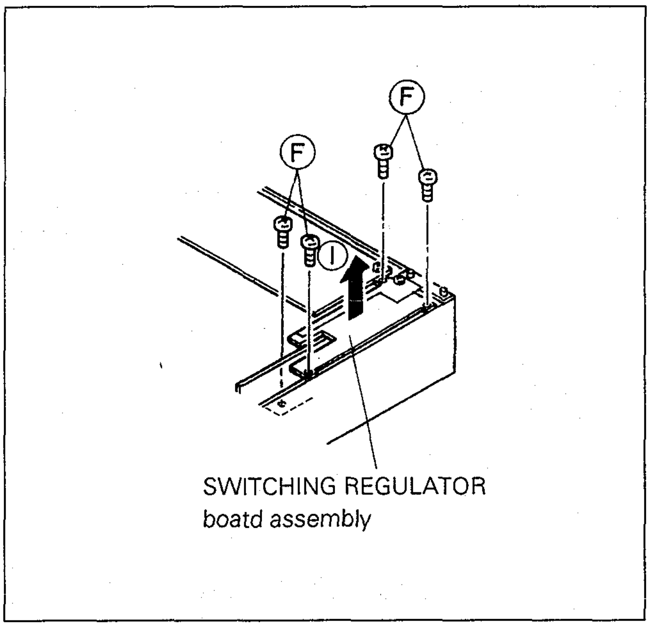

F
F
I
SWITCHING REGULATOR
boatd assembly

Fig. 1-5 SWITCHING REGULATOR board assembly

1.1.6 PRE/REC board assembly

1. Remove the top cover and TU/DEM/P/V board assembly.
2. Take out a screw Ⓖ’ then remove the shield.
3. Take out two screws Ⓖ.
4. Disconnect connectors CN201, CN1, CN2 and CN3 from the PRE/REC board assembly.
5. Remove the PRE/REC board assembly.

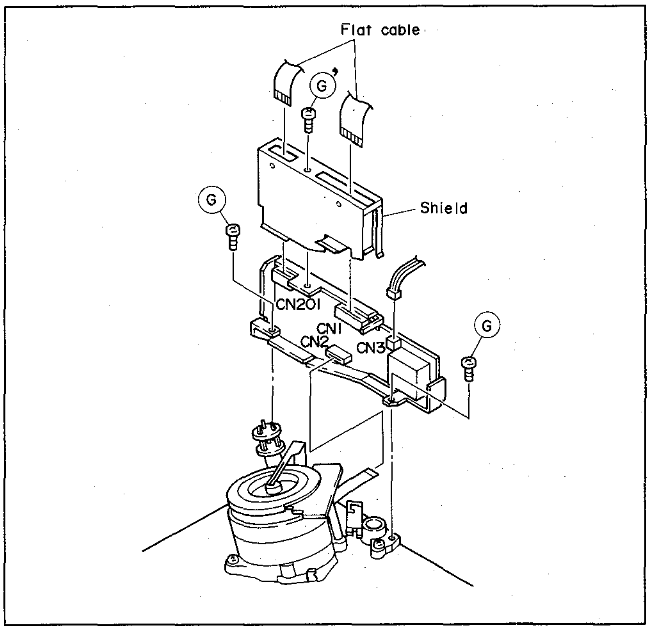

Flat cable
G
Shield
G
CN201
CN1
CN2
CN3
G

Fig. 1-6 PRE/REC board assembly

1.1.7 DISPLAY board assembly and SWITCH/JACK board assembly

1. Remove the top cover and front panel assembly.
2. Disconnect one connector ⓐ.
3. Disengage four tabs ⓑ and remove DISPLAY board assembly.
4. Disengage two tabs ⓒ and remove SWITCH/JACK board assembly.

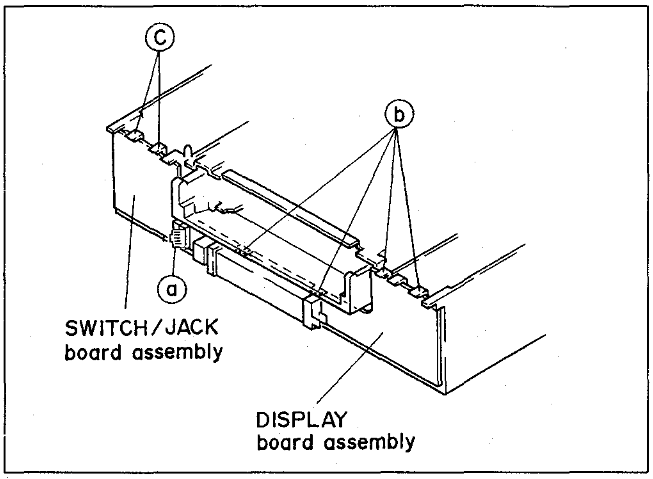


Fig. 1-7 DISPLAY board assembly and SWITCH/JACK board assembly

1.1.8 Cassette housing assembly

Note: ***When install or remove the cassette housing assembly, be sure set the Eject position of mechanism condition.***

1. Remove the top cover and front panel assembly.
2. Take out two screws Ⓜ and two screws Ⓝ, tilt up the cassette housing assembly in direction ①.
3. Disengage two tabs ⓐ and remove the cassette housing assembly.

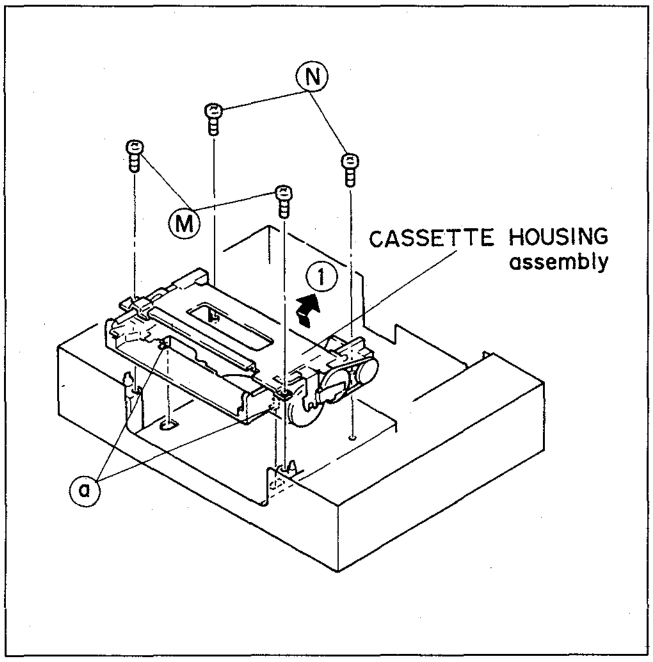


Fig. 1-8 Cassette housing assembly

1.1.9 Main deck assembly

1. Remove top cover, front panel assembly, and cassette housing assembly.
2. Take out three screws Ⓗ.
3. Tilt up the main deck assembly in direction ① and remove it.

Notes:

- ***For check the bottom side of main deck assembly, take out screws Ⓗ, and set up the front side of chassis as shown in Fig. 1-9B.***
- ***Install the main deck assembly, use care not to damage flat wires and put the wiring correctly. If these are incorrect, the mode motor will not rotate properly.***

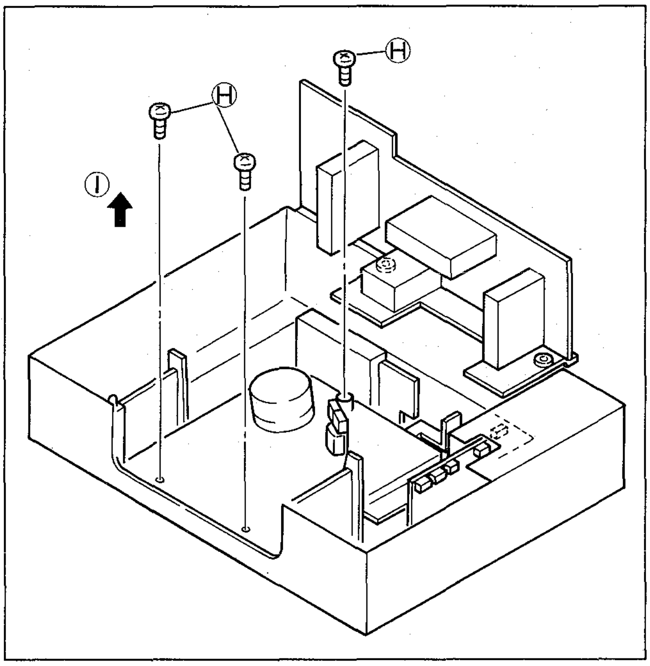


Fig. 1-9 A Main deck assembly-1

4. For checks and repairs, set up the main deck assembly to front of chassis as shown in Fig 1-9B

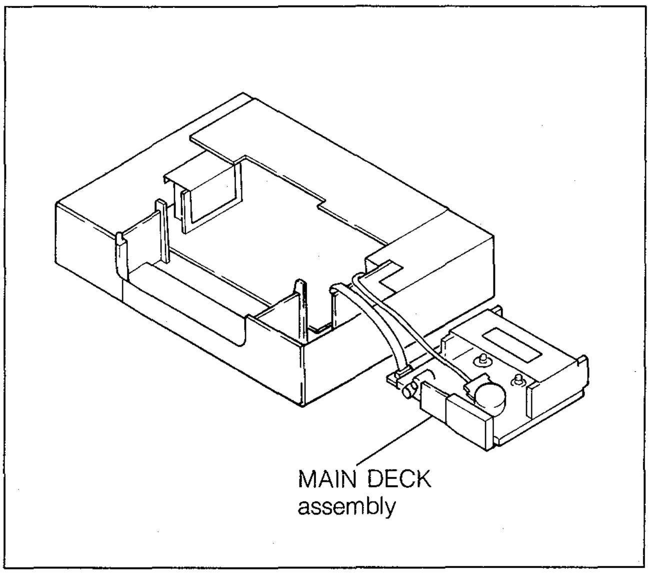


Fig. 1-9 B Main deck assembly-2

1.1.10 DECK TERMINAL board assembly

1. Remove the top cover and main deck assembly.
2. Take out four screws Ⓛ.
3. Remove the capstan belt and washer.
4. Disconnect one connector ⓐ, disengage two tabs ⓑ, and remove the DECK TERMINAL board assembly.

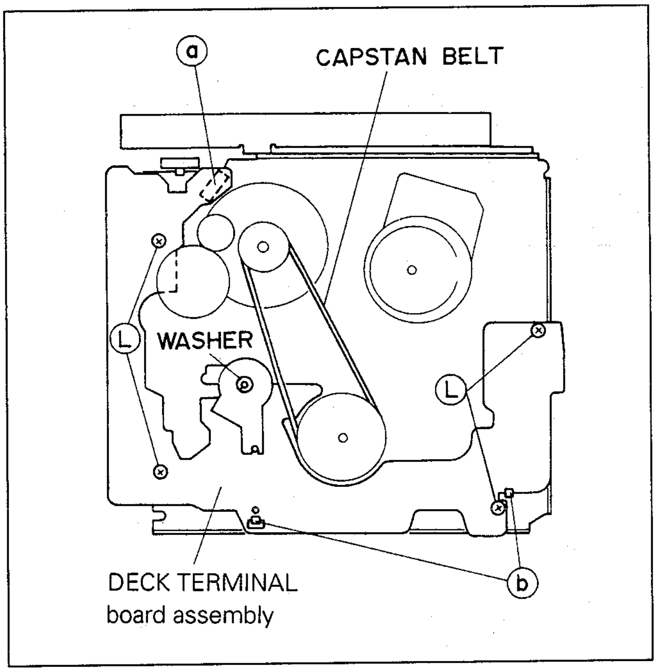


Fig. 1-10 DECK TERMINAL board assembly

1.1.11 MAIN board assembly

1. Remove the top cover, front panel assembly, TU/IF board assembly, main deck assembly and cassette housing assembly.
2. Take out four screws Ⓟ, tilt up the MAIN board assembly in direction ① and remove it.

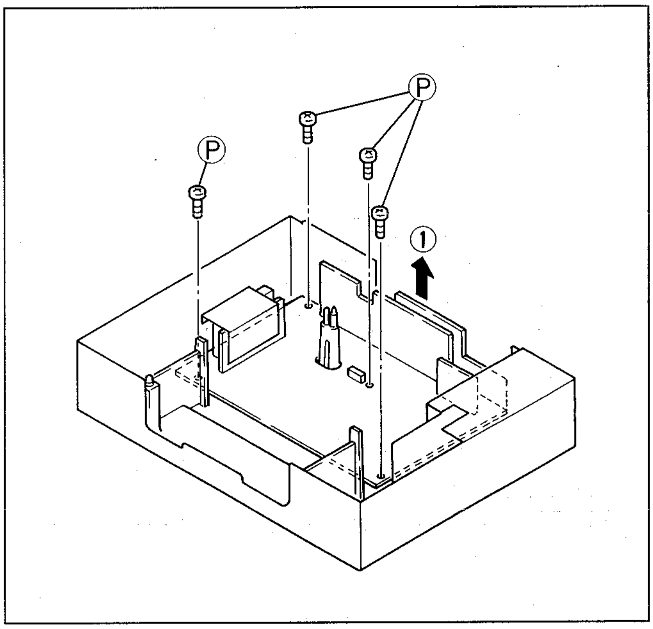


Fig. 1-11 MAIN board assembly

SECTION 2
MECHANISM ADJUSTMENT

2.1 PREPARATION

2.1.1 Precautions

1) Disconnect VCR from AC power before soldering.
2) Avoid imparting stress to wires when disengaging connectors.
3) Determine and correct the cause of difficulty before proceeding to adjustments. Do not disturb settings unnecessarily.
4) Use care not to damage tabs, claws, etc. during repairs.
5) Install the cassette housing assembly only when the mechanism is in the Eject or Stop mode position. In the Eject mode, the internal holder of the housing is fully raised. This is fully lowered in the Stop mode.
6) When installing the front panel assembly, be sure to engage the housing door with the door lever of the cassette housing assembly. If this is omitted, the door will not open at Eject and the cassette cannot be removed.
   See Sec.1 DISASSEMBLY.

2.1.2 Check without cassette housing

Mechanism operations can be observed easily by removing the cassette housing assembly. Note the following.

1) Disconnect the power cord from the AC outlet, and remove the top cover, the front panel and the cassette housing assembly in this order.
2) Disable the photo transistor sensor (END SENSOR, START SENSOR) on the main-deck by applying an opaque cover.
3) Set the CASSETTE switch (push switch) to ON.
4) Release the LED guide from the hook while removing it.
5) Connect the pwer cord to the AC outlet and turn on the POWER switch. Select the desired operation modes with the operation buttons or remote control unit. However, notice that without tape, setting for the REW or FF direction modes produces the Stop mode after a few seconds later and power supply is cut off due to absence of the reel sensor output.

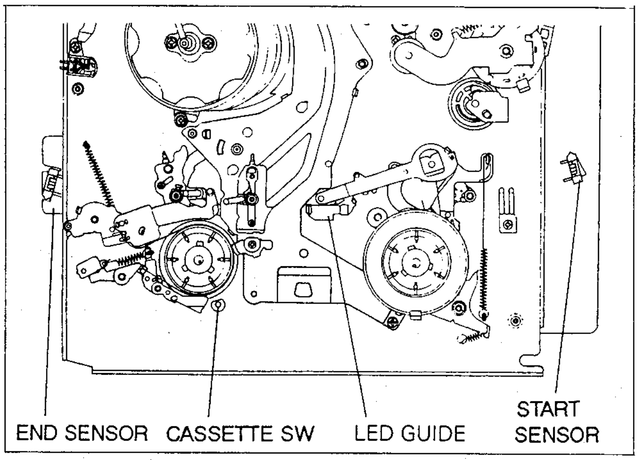


Fig. 2-1-1 Checking without cassette housing

2.1.3 Manual removal of loaded tape

In event of failure which leaves the tape in the loaded position, remove it by the following procedure.

1) Disconnect the power cord from the AC outlet, and remove the top cover and the front panel in this order.
2) Turn the loading motor on the main deck by hand in the direction of the arrow to unload the tape. At that time, pay careful attention to the tape not to get soiled with grease.
3) Remove the cassette housing assembly.
4) Turn the reel of the cassette tape to take in the slack of the tape. During this work, hold down the cassette tightly by hand, otherwise it may damage the tape.
5) Take off the cassette from the cassette housing.

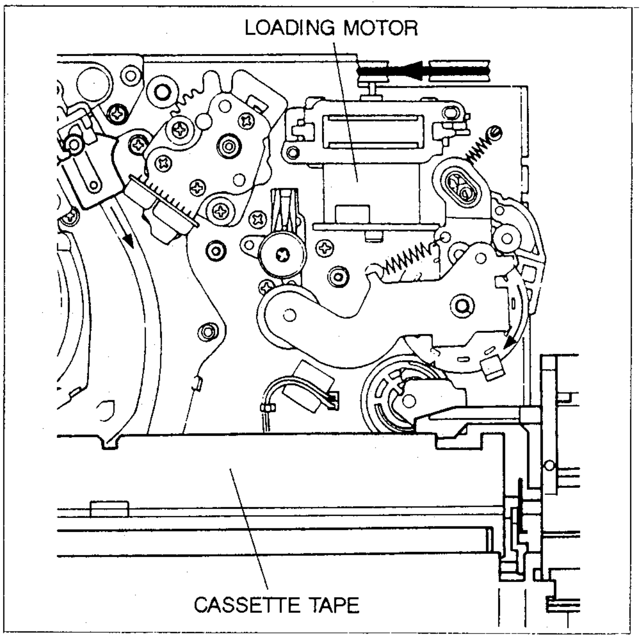


Fig. 2-1-2 Manual removal of loaded tape

2.1.4 Test equipment

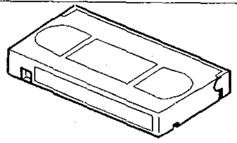
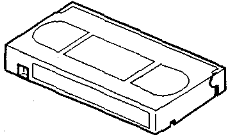
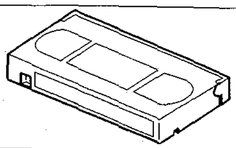
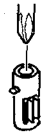
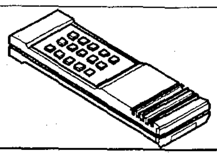
Alignment tape (SP) MHPE	Alignment tape (LP) MHPE-L	Back tension cassette gauge PUJ48076-2
		
A/C head positioning tool PTU94010	Presetting unit PTU94008	
		

Table 2-1-1

2.2 MAIN MECHANISM PARTS

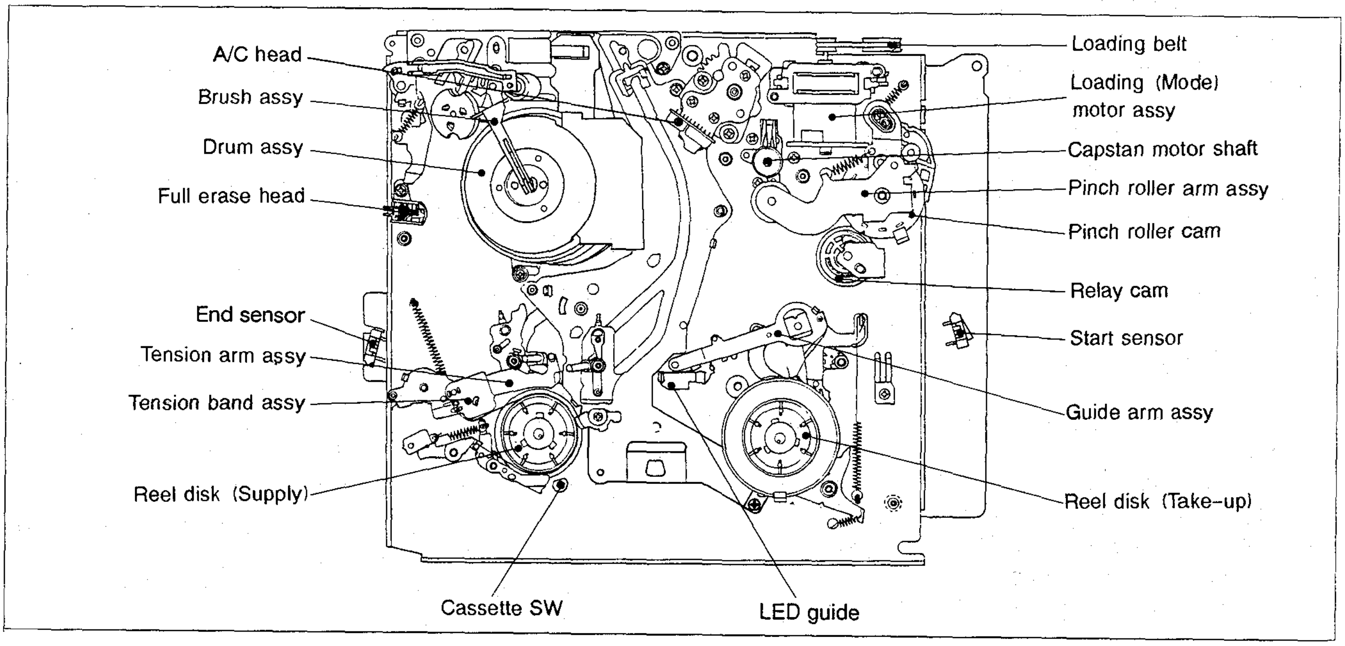

A/C head
Brush assy
Drum assy
Full erase head
End sensor
Tension arm assy
Tension band assy
Reel disk (Supply)
Cassette SW
LED guide
Loading belt
Loading (Mode) motor assy
Capstan motor shaft
Pinch roller arm assy
Pinch roller cam
Relay cam
Start sensor
Guide arm assy
Reel disk (Take-up)

Fig. 2-2-1 Top view of main-deck

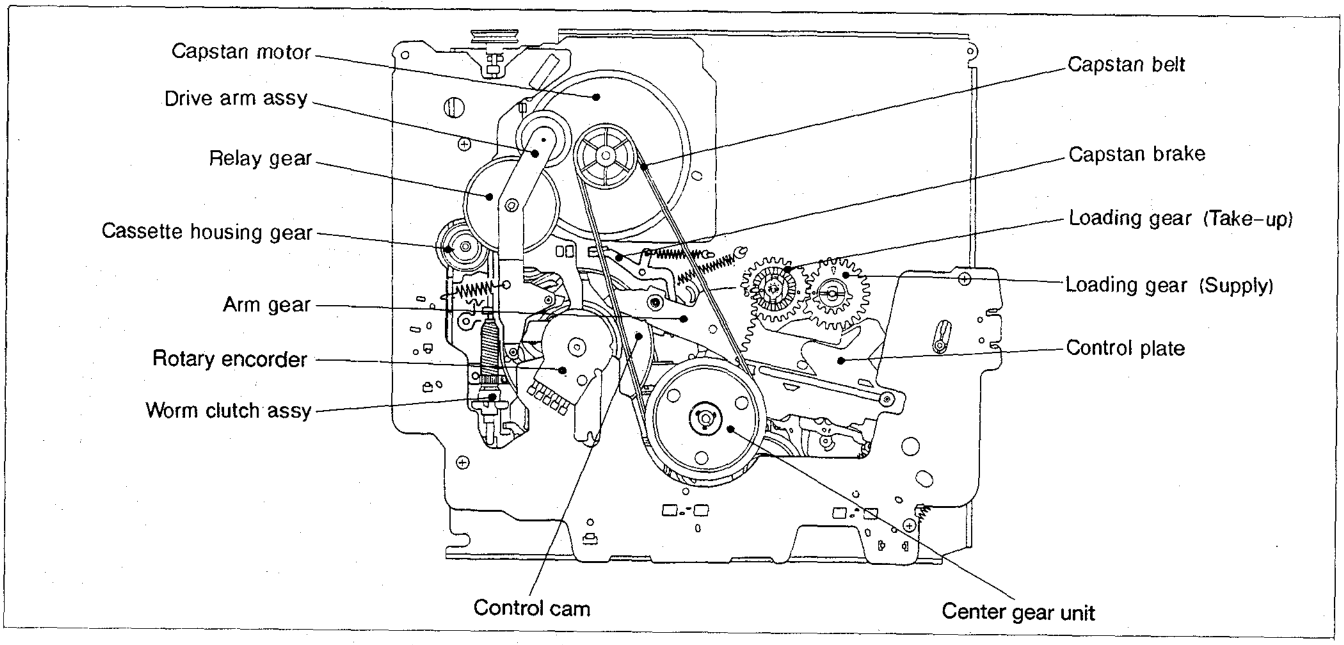

Capstan motor
Drive arm assy
Relay gear
Cassette housing gear
Arm gear
Rotary encorder
Worm clutch assy
Control cam
Center gear unit
Capstan belt
Capstan brake
Loading gear (Take-up)
Loading gear (Supply)
Control plate

Fig. 2-2-2 Bottom view of main-deck

2.2.1 Cleaning

Periodic cleaning of the tape transport system is desirable, but ordinarily not feasible in practice. Therefore, perform cleaning when a set is brought in for repairs or maintenance. Contamination of the video heads, tape guides and brushes can detract from playback picture quality and in extreme cases, even damage the tape. For cleaning, use a fine-mesh cotton cloth (about the texture of a white dress-shirt) moistened in alcohol.

- To clean the video heads, press the moistened cloth gently against the upper drum with fingertip and turn the drum by hand.
- Do not use a vertical stroke, as this may damage the heads.

2.2.2 Lubrication

Oil and grease do not normally require periodic replenshing. Apply only when replacing lubricated parts (also clean and replace lubrication of mating parts if soiled).
For parts and points to apply oil and grease, refer to the exploded views of the mechanism assembly.
Before oiling, clean with alcohol.
Apply one or two drops of oil.
Avoid excess oil.

1) Table 2-2-1 indicates the oil and grease used in this set. Use these or recommended locally available equivalents.

Category	Part No.
Oil	COSMO-HV56
Grease	KANTO-G-31KAV

Table 2-2-1

2) Grease is not required for a replacement cassette housing assembly, as this has been applied at the factory.

Note: ***Stir grease that has been stored for an extended period.***

2.3 INSPECTION AND MAINTENANCE

This product employs rotary and moving parts which wear out in the course of usage. Periodic inspection, cleaning, lubrication and maintenance are therefore important for ensuring maximum performance. Worn parts must also be replaced as and when required.

2.3.1 Suggested servicing schedule for main components

The following table indicates the suggested period for such service measures as cleaning, lubrication and replacement. In practice, the indicated periods will vary widely according to environmental and usage conditions. However, the indicated components should be inspected when a set is brought for service and the maintenance work performed if necessary.
Also note that rubber parts may deform in time, even if the set is not used.

System	Parts Name	Operation hours						
		250	500	750	1000	1250	1500	2000
Tape Transport	Upper drum assy	★	★	★	○	★	○	○
	A/C head	★			○			○
	Pinch roller arm assy	★	★	★	★	★	★	★
	Full erase head							
	Tension arm assy							
	Lower drum motor assy							
	Capstan motor (Shaft)							
Drive	Capstan motor							○
	Capstan belt			○				○
	Mode motor assy							○
	Loading belt			○				○
	Reel disk (Supply)							○
	Reel disk (Take-up)							○
	Clutch assy							○
	Worm clutch assy							○
Brake	Sub brake assy			○				○
	Main brake assy			○				○
	Tension band assy							○
Others	Brush assy			★				○
	Tension band assy							○

★ : Cleaning
○ : Inspection or Replacement if necessary

Table 2-3-1

2.4 MECHANISM DISASSEMBLY & INSTALLATION

2.4.1 Disassembly of Mechanism

1. Precaution before disassembling mechanism

This mechanism has an exclusive operation mode provided for disassembling and installation of the mechanism, and it is suggested to set the mechanism to this mode before disassembly and installation. The exclusive mechanism operation mode is not generally used and becomes available by manual setting only.

Note: *Although the mechanism can be disassembled when it is set in the EJECT mode, it is recommended that you set it to the exclusive mechanism operation mode.*

2. Setting of exclusive mechanism operation mode

Turn the Pinch Roller Cam clockwise as viewed from the upper side so as to rotate the Loading Motor in the direction of the arrow, while adjusting positions of the Pinch Roller Cam and the Relay Cam so that their markings coincide with each other as shown in Fig. 2-4-2.
At that time, both the pole bases should be moved to the full extent in the direction of the Reel Base Assembly (supply side).

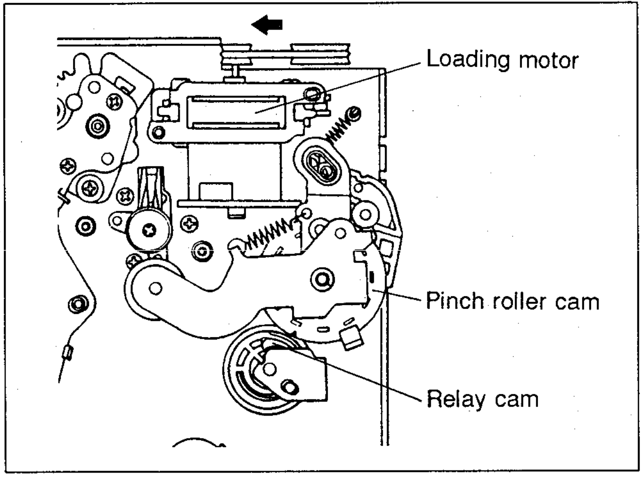


Fig. 2-4-1

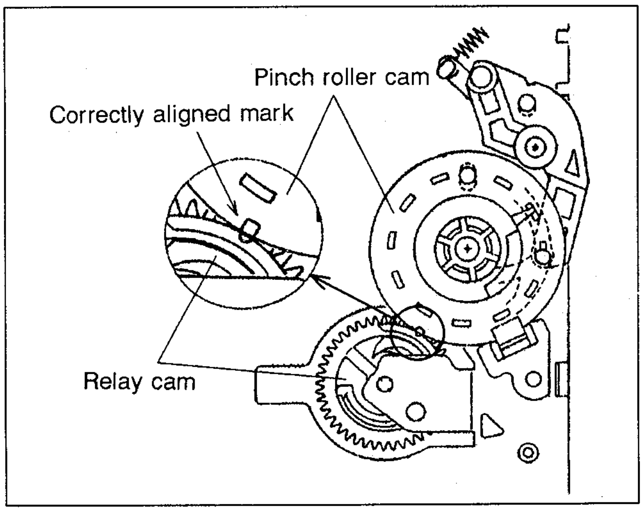


Fig. 2-4-2

3. Disassembling of the lower mechanism assembly

1) Unsolder the Rotary Encoder from the DECK TERMINAL board (at five points) and remove the slit washer (1'). Release the Rotary Encoder from the hooks in the both sides while removing it for replacing.
When the Rotary Encoder is not being replaced, remove the slit washer only and take off the Rotary Encoder which is soldered to the DECK TERMINAL board.
2) Remove the tension spring (2") and the slit washer (2') while taking off the Drive Arm Assembly.
3) Remove the Relay Gear.

No.	Part name
1	Rotary encoder
1'	Slit washer
2	Drive arm assembly
2'	Slit washer
2"	Tension spring
3	Relay gear

Table 2-4-1

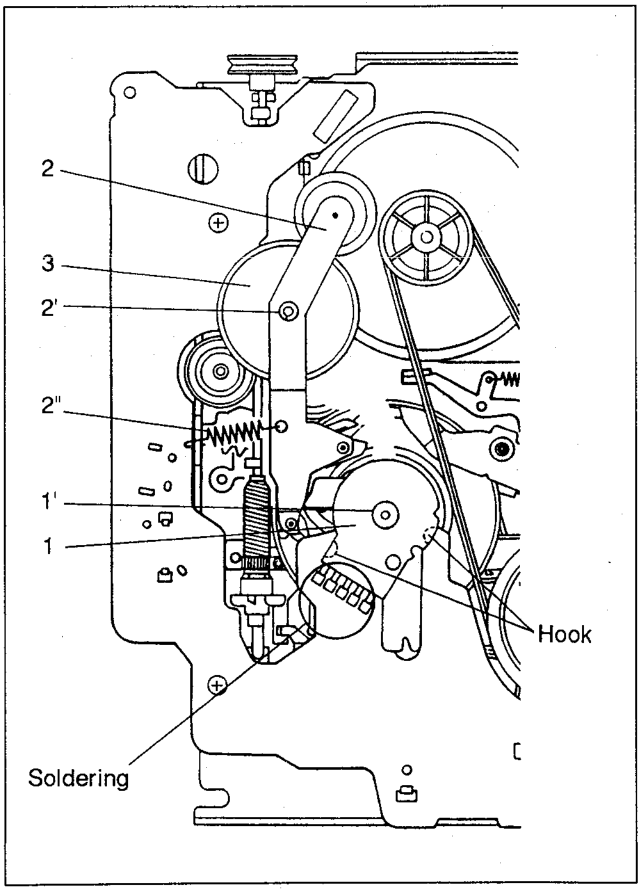


Fig. 2-4-3

4) Disengage the CAPSTAN belt.
5) Remove the 4 screws (5'), disconnect the connector (CN2), and disengage the 2 hooks. Then remove the DECK TERMINAL board.

No.	Part name
4	Belt
5	Deck terminal board assembly
5'	Screws (x4)
5"	Connector (CN2)

Table 2-4-2

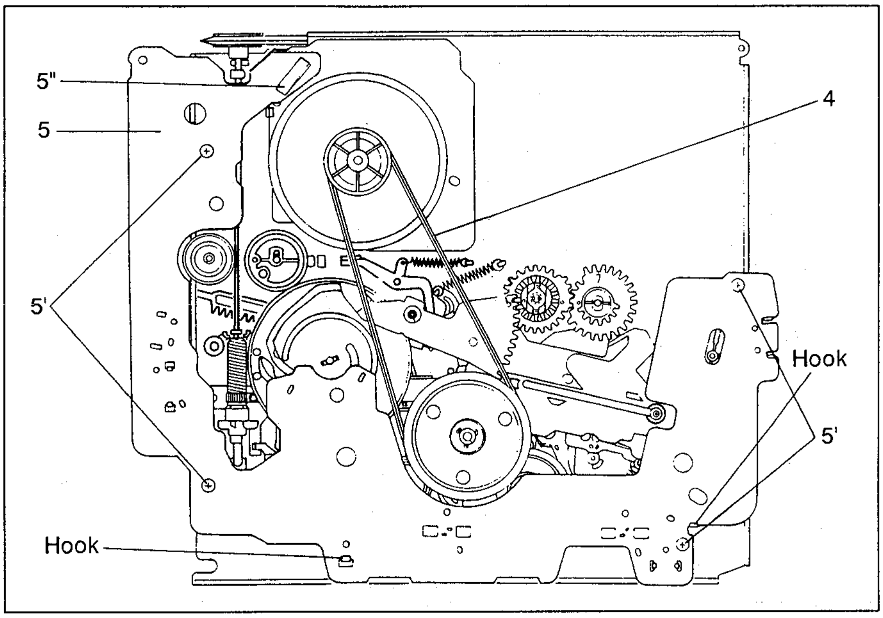


Fig. 2-4-4

6) **Remove the slit washer (6') while taking off the Arm Gear.**
7) Expand the two center hooks outwards while removing the Control Cam. Carefully do this work not to damage the hooks.
8) Remove the slit washer (8') and the Center Gear Unit.
9) Disengage the loading belt, and release the Worm Clutch Assembly from the 3 hooks while taking it off. Carefully do this work not to damage the hooks.
10) Remove the slit washer (10') and the Control Plate.

No.	Part name
6	Arm gear
6'	Slit washer
7	Control cam
8	Center gear unit
8'	Slit washer
9	Worm clutch assembly
9'	Belt
10	Control plate
10'	Slit washer

Table 2-4-3

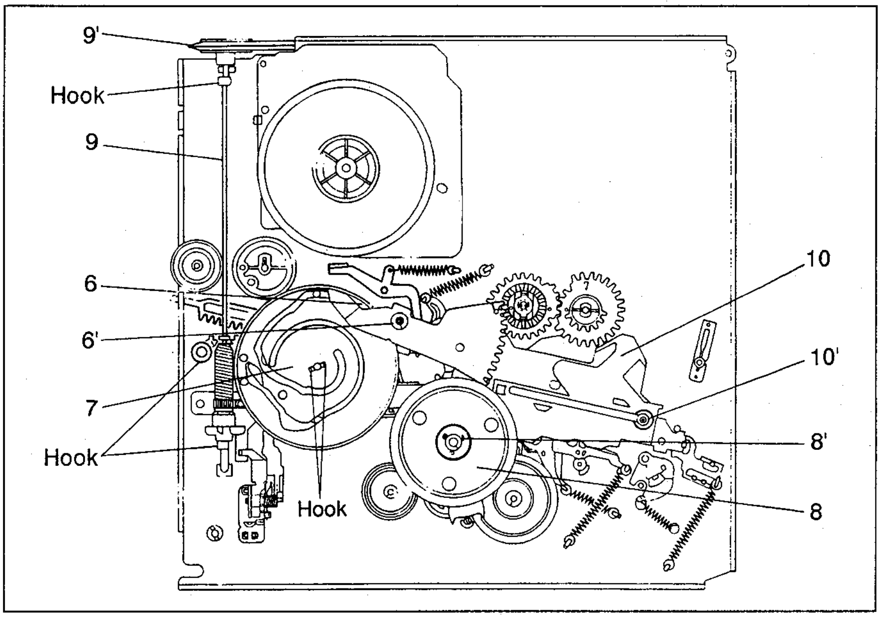


Fig. 2-4-5

11) Disengage the tension spring (11') and remove the Capstan Brake.
12) Disengage the tension spring (12') at one end, and release the Slide Plate from the two hooks while taking it off.
13) Remove the slit washer (13') and the Cassette Housing Gear.
14) Spread out the center hook of the Relay Cam with care not to damage the hook, and remove the Relay Cam.
15) Pull out the S-switch (S-VHS) pin, which requires careful attention not to lose it because it becomes free when the DECK TERMINAL board is removed.
16) Set the Slide Base Assembly free, then move it upwards while removing it.
17) Remove the Reset Lever.
18) Remove the Idler Unit.
19) Disengage the tension spring (19') at one end, and remove the Idler Cancel Lever.
20) Remove the slit washer (20') of the Clutch Gear Unit (TU side) and take it off.
21) Remove the slit washer (21') of the Clutch Gear Unit (SUP side) and take it off.
22) Expand the two outer hooks in the center of the Loading Gear (TU side) and take off the Loading Gear. Carefully do this work not to damage the hooks.
23) Remove 1 screw (23') and the arm of the Loading Gear Assembly (SUP side), and release the Loading Gear Assembly (SUP) from the 2 hooks by expanding them while taking it off in the free status. During this work, pay careful attention to the hooks not to damage them.
24) Disengage the tension spring (24') at one end and escape the Main Brake Assembly from the center hook while taking it off.
25) Disengage the tension spring (25') at one end and take off the Take-up Lever.
26) Disengage the tension spring (26') at one end and escape the Off Lever Assembly from the center hook while taking it off.
27) As the Slider Assembly on the upper side of the deck is removed, disengage the tension spring (27') and expand the center hook while taking off the Tension Lever Assembly.
28) Disengage the tension spring on the upper side of the deck, and mode the spring base upwards to remove it.
29) Remove the 3 screws from the upper side of the deck, release the Capstan Motor from the 2 hooks on the lower part of the deck while taking off the motor.

No.	Part name
11	Capstan brake assembly
11'	Tension spring
12	Slide plate
12'	Tension spring

Table 2-4-4

No.	Part name
13	Cassette housing gear
13'	Slit washer
14	Relay cam
15	S-SW pin (S-VHS)
16	Slide base assembly
17	Reset lever
18	Idler unit
19	Idler cancel lever
19'	Tension spring
20	Clutch gear unit (TU)
20'	Slit washer
21	CLutch gear unit (SUP)
21'	Slit washer
22	Loading gear (TU)
23	Loading gear assembly (SUP)
23'	Screw
24	Main brake assembly (SUP)
24'	Tension spring
25	Take-up lever
25'	Tension spring
26	OFF lever assembly
26'	Tension spring
27	Tension lever assembly
27'	Tension spring
28	Spring base
29	Capstan Motor

Table 2-4-5

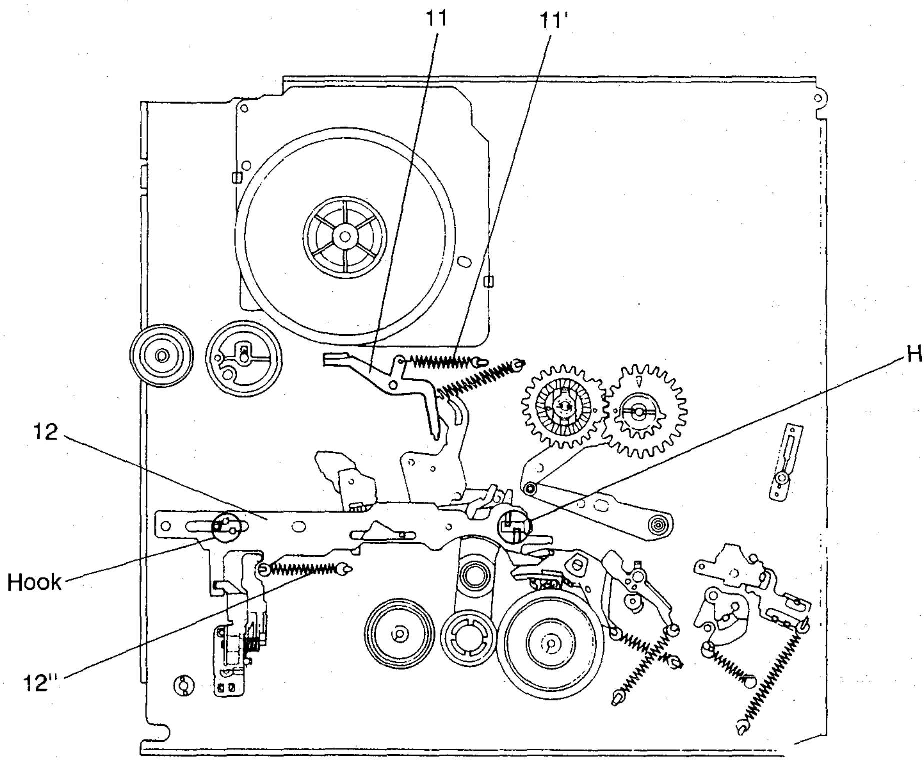

11
11'
Hook
12
Hook
12''

Fig. 2–4–6

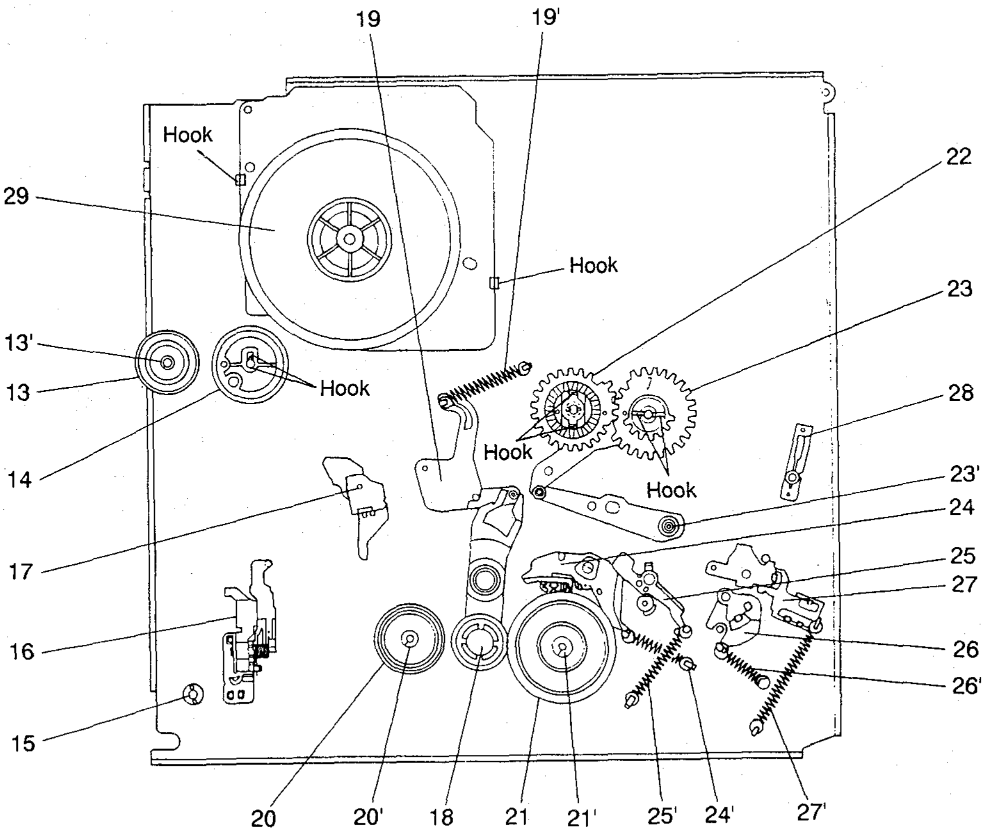

19
19'
Hook
22
29
Hook
23
13'
13
Hook
28
14
Hook
Hook
23'
24
17
25
27
16
26
26'
15
20
20'
18
21
21'
25'
24'
27'

Fig. 2–4–7

4. Disassembling of the upper mechanism assembly

1) Remove the slit washer (1'), the Pinch Roller Arm Assembly and the compression spring (1") in this order.
2) Release the Pinch Roller Cam from the hook while taking it off.
3) Disengage the compression spring (3') and take off the Pinch Roller Lever.

No.	Part name
1	Pinch roller arm assembly
1'	Slit washer
1"	Compression spring
2	Pinch roller cam
3	Pinch roller lever
3'	Compression spring

Table 2-4-6

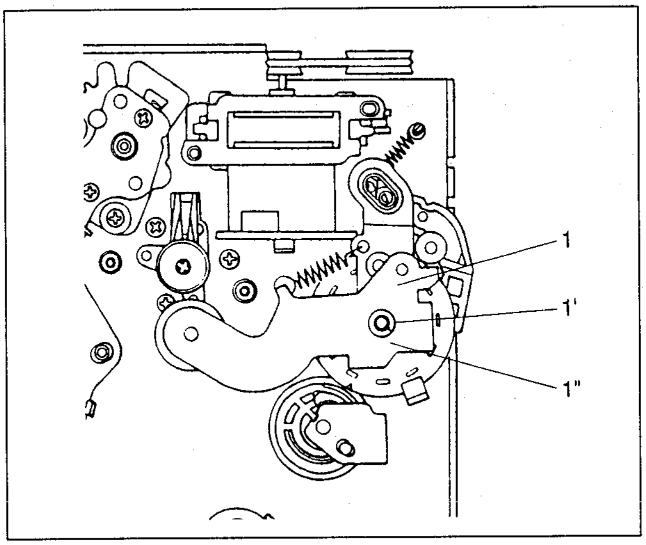


Fig. 2-4-8

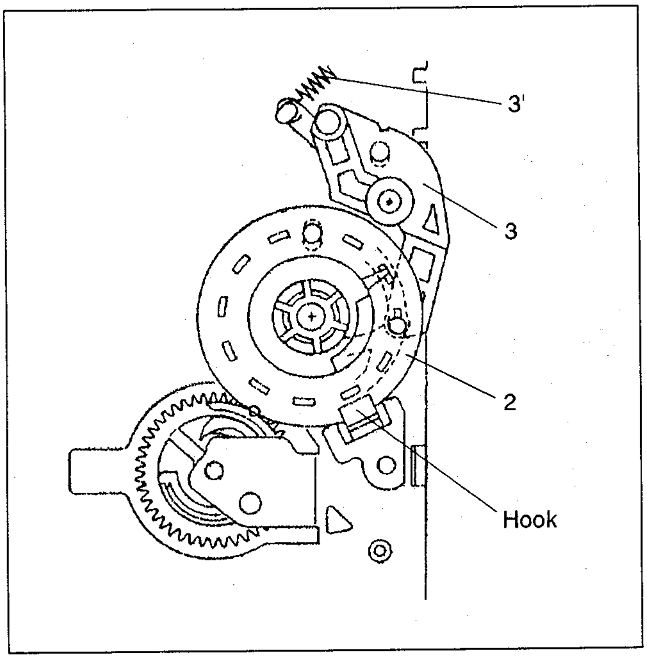


Fig. 2-4-9

2.4.2 Installation of mechanism

1. Precaution before reassembling mechanism

Check that all the mechanism parts on the upper side of the deck are set in the exclusive mechanism operation mode.

2. Installation of lower mechanism assembly parts

1) Install the Capstan Motor and tighten it with 3 screws from the upper side of the deck.
2) Install the Spring Base and engage the tension spring on the upper side of the deck.
3) Install the Tension Lever Assembly and engage the tension spring (3').
4) Install the Off Lever Assembly and engage the tension spring (4').
5) Install the Take-up Lever and engage the tension spring (5').
6) Install the Main Brake (SUP side) and engage the tension spring (6').
7) Install the Loading Gear Assembly (SUP side) and fix the arm and the Pole Base Assembly with a screw (7').
8) Confirm the mechanism mode that is set to the exclusive mechanism operation mode, and install the Loading Gear (TU side) with the hole aligned with the hole on the Loading Gear Assembly (SUP side) as the Tension Arm is returned to the front side.
9) Install the Clutch Gear (SUP side) and the slit washer (9') with care not to contact with the Main Brake.
10) Install the Clutch Gear Unit (TU side) and the slit washer (10').
11) Install the Idler Cancel Lever and engage the tension spring (11').
12) Install the Idler Unit.
13) Install the Reset Lever.
14) Install the Slide Base Assembly while re-engaging the tension spring on the upper side of the deck.
15) Install the S-switch (S-VHS) pin.
16) Install the Relay Cam with the hole aligned with hole on the chassis.
17) Install the Cassette Housing Gear and the slit washer (17').

No.	Part name
1	Capstan Motor
2	Spring base
3	Tension lever assembly
3'	Tension spring
4	OFF lever assembly
4'	Tension spring
5	Take-up lever
5'	Tension spring
6	Main brake assembly (SUP)
6'	Tension spring
7	Loading gear assembly (SUP)
7'	Screw
8	Loading gear (TU)

Table 2-4-7

No.	Part name
9	Clutch gear unit (SUP)
9'	Slit washer
10	Clutch gear unit (TU)
10'	Slit washer
11	Idler cancel lever
11'	Tension spring
12	Idler unit
13	Reset lever
14	Slide base assembly
15	S-SW pin (S- VHS)
16	Relay cam
17	Cassette housing gear
17'	Slit washer

Table 2-4-8

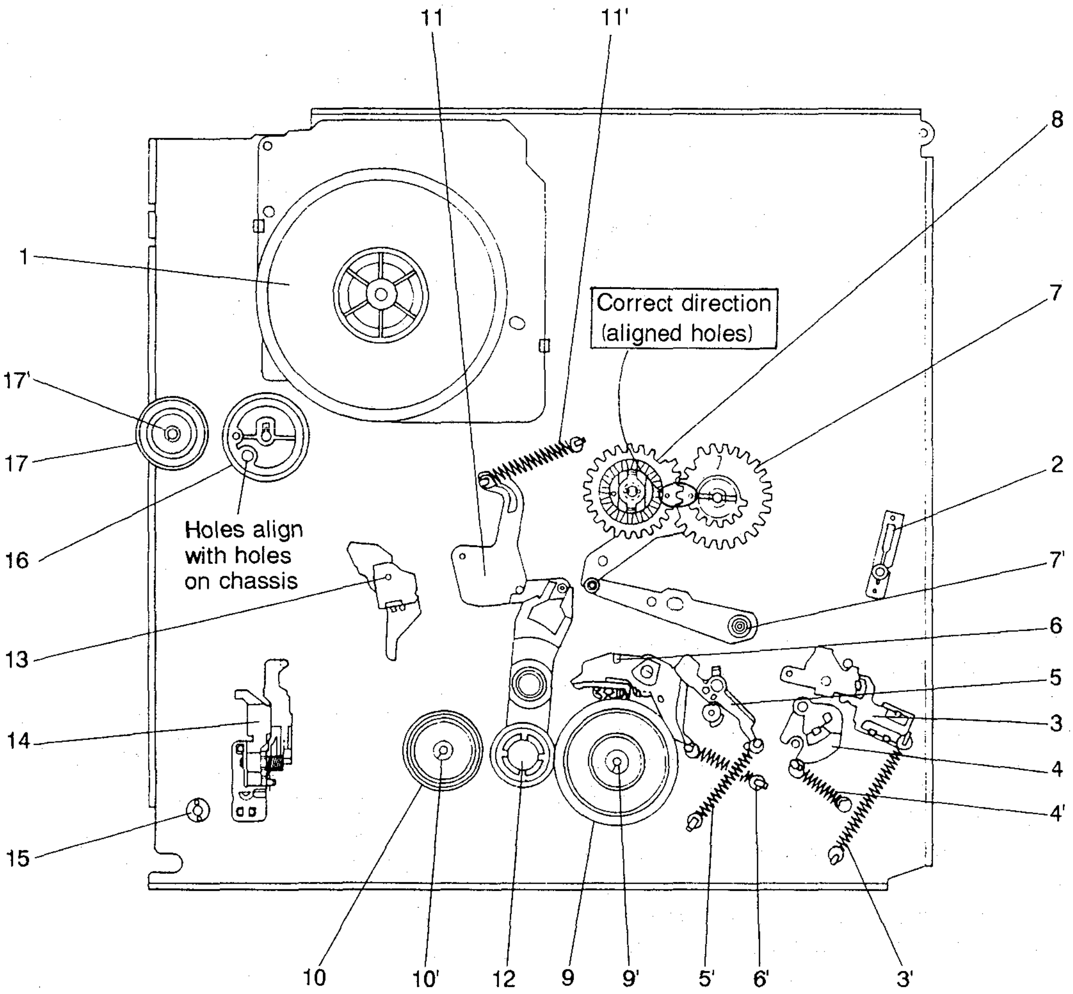

11
11'
8
1
Correct direction (aligned holes)
7
17'
17
2
16
Holes align with holes on chassis
7'
13
6
5
14
3
4
4'
15
10
10'
12
9
9'
5'
6'
3'

Fig. 2-4-10

18) Install the Slide Plate with the lower stud of the Main Brake (TU side) set in the groove, and engage the tension spring (18') . Set the Slide Plate on the deck with the hole aligned with the hole on the chassis in the stage to install the mechanism parts on the upper side of the deck.

Note: *If the Slide Plate is pulled to the phase adjusting position in the above mentioned state, the Main Brake (SUP side) catches the tip of Slide Plate and it is locked accordingly. Do not continue reassembling of the mechanism parts in this condition to prevent the Slide Base Assembly from getting damaged.*

19) Install the Capstan Brake Assembly and engage the tension spring (19').

No.	Part name
18	Slide plate
18'	Tension spring
19	Capstan brake assembly
19'	Tension spring

Table 2-4-9

20) Push the Take-up Lever with the two holes alinged with the holes on the chassis (see Fig. 2-4-12) . In this condition install the Control Plate and the slit washer (20').

21) Install the Worm Clutch Assembly and engage the belt (for the Mode Motor) between the Worm Assembly and the Loading Motor.

No.	Part name
20	Control plate
20'	Slit washer
21	Worm clutch assembly
21'	Belt

Table 2-4-10

22) Push the Idler Cancel Lever while installing the Center Gear Unit and the slit washer (22') (see Fig. 2-4-13) with careful attention to the studs of the Idler Cancel Lever and the chassis so that both the studs are correctly set in the upper and the lower grooves of the Center Gear Unit respectively.

23) Install the Control Cam with the hole aligned with hole on the chassis. At that time, the stud in the tip of the Slide Base Assembly must be exactly set in the outer groove of the Control Cam.

No.	Part name
22	Center gear unit
22'	Slit washer
23	Control cam

Table 2-4-11

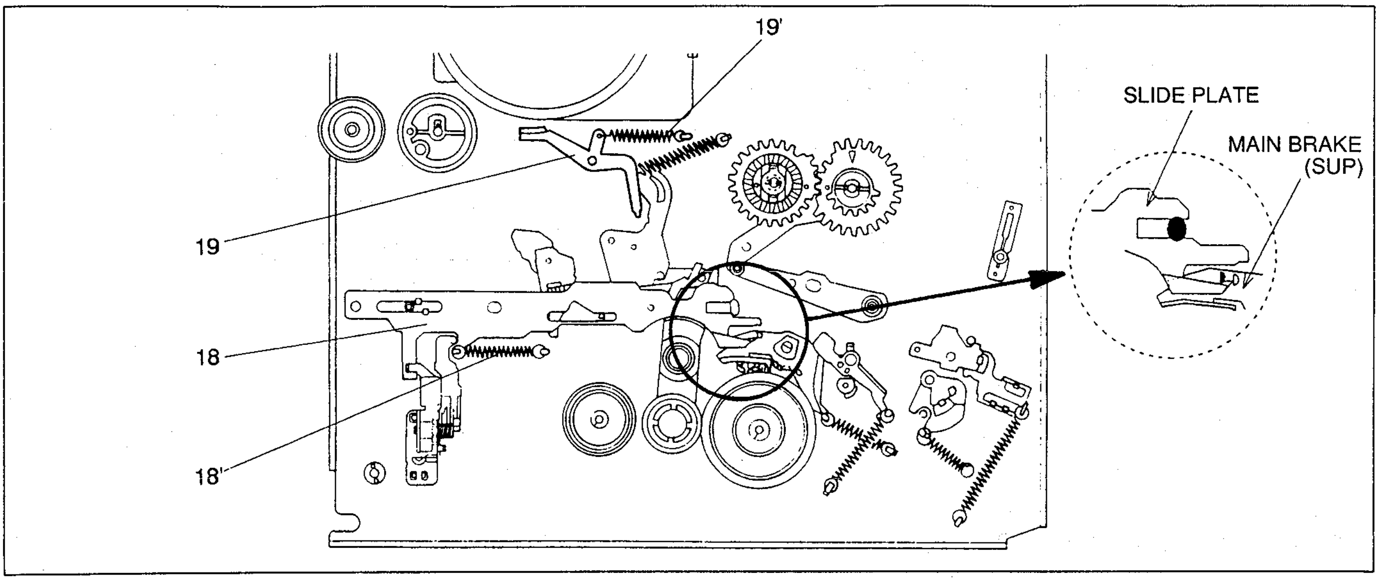
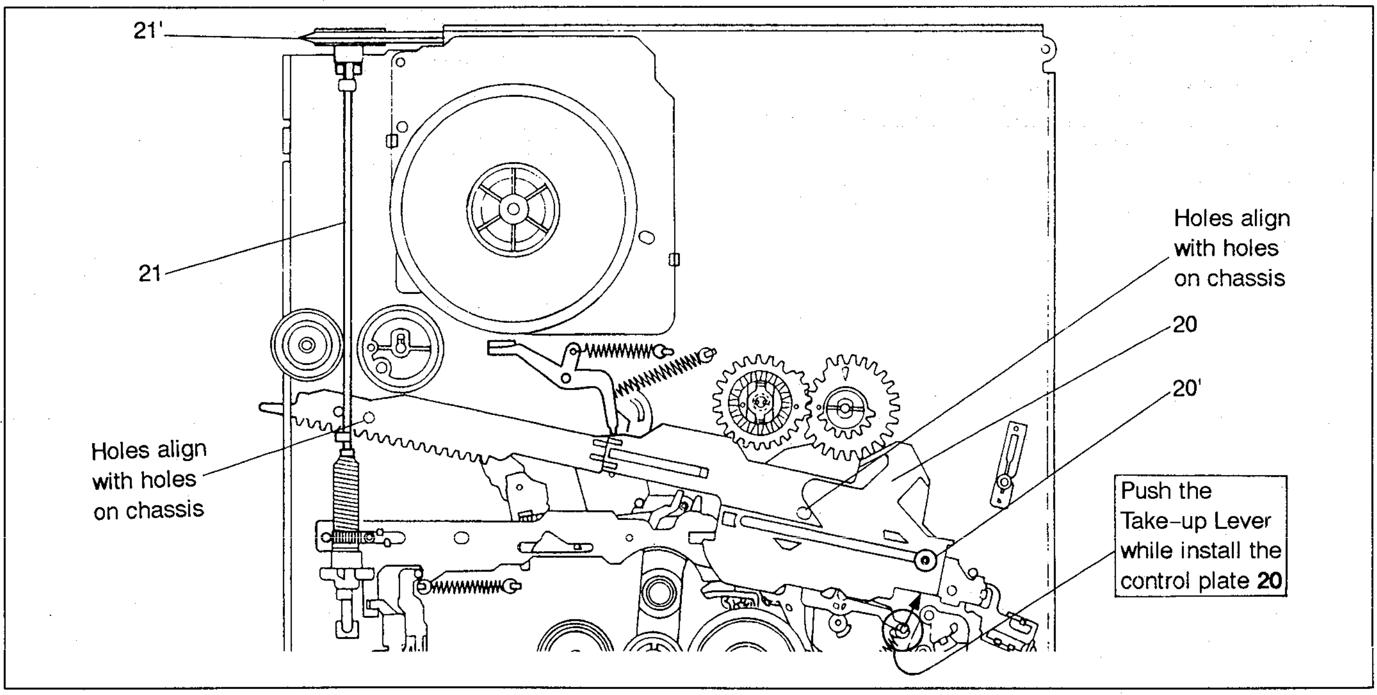
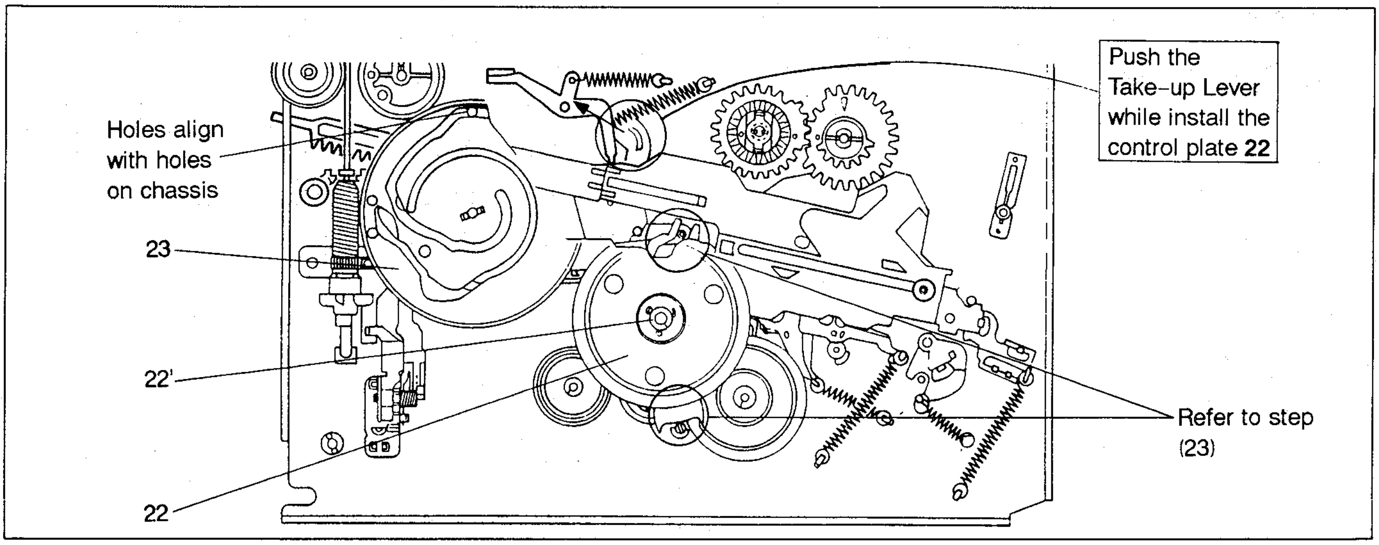

19'
SLIDE PLATE
MAIN BRAKE (SUP)
19
18
18'

Fig. 2-4-11


21'
21
Holes align with holes on chassis
20
20'
Holes align with holes on chassis

Push the Take-up Lever while install the control plate **20**

Fig. 2-4-12


Holes align with holes on chassis
23
22'
22

Push the Take-up Lever while install the control plate **22**

Refer to step (23)

Fig. 2-4-13

24) Install the Arm Gear with the hole aligned with the hole on the Loading Gear (TU side) while securing it with the slit washer (24'). At that time, make sure to set the stud of the Arm Gear in the groove of the Control Cam exactly.

No.	Part name
24	Arm gear
24'	Slit washer
24"	Tension spring

Table 2-4-12

25) When installing the DECK TERMINAL board, proceed in the following order; connect CN2, engage 2 hooks, and tighten the board with 4 screws (25').
When the Rotary Encoder is soldered to the DECK TERMINAL board, confirm that the hole of the Rotary Encoder is correctly positioned first, then install the DECK TERMINAL board and the slit washer.

26) Engage the belt (for the Capstan Motor) between the Capstan Motor and the Center Gear Unit.

No.	Part name
25	Deck Terminal board
25'	Screws (x 4)
25"	Connector (CN2)
26	Belt

Table 2-4-13

27) Install the Relay Gear.

28) Install the Drive Arm Assembly, slit washer (28'), and engage the tension spring (28").

29) Install the Rotary Encoder after confirming that the hole is correctly positioned, engage the slit washer (29') and solder the Rotary Encoder.

No.	Part name
27	Relay gear
28	Drive arm assembly
28'	Slit washer
28"	Tension spring
29	Rotary encoder
29'	Slit washer

Table 2-4-14

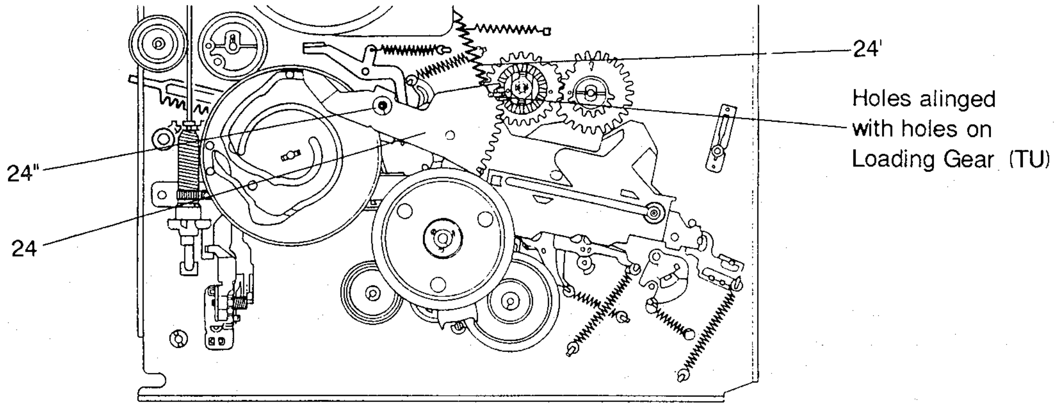

24'
Holes alinged
with holes on
Loading Gear (TU)
24"
24

Fig. 2-4-14

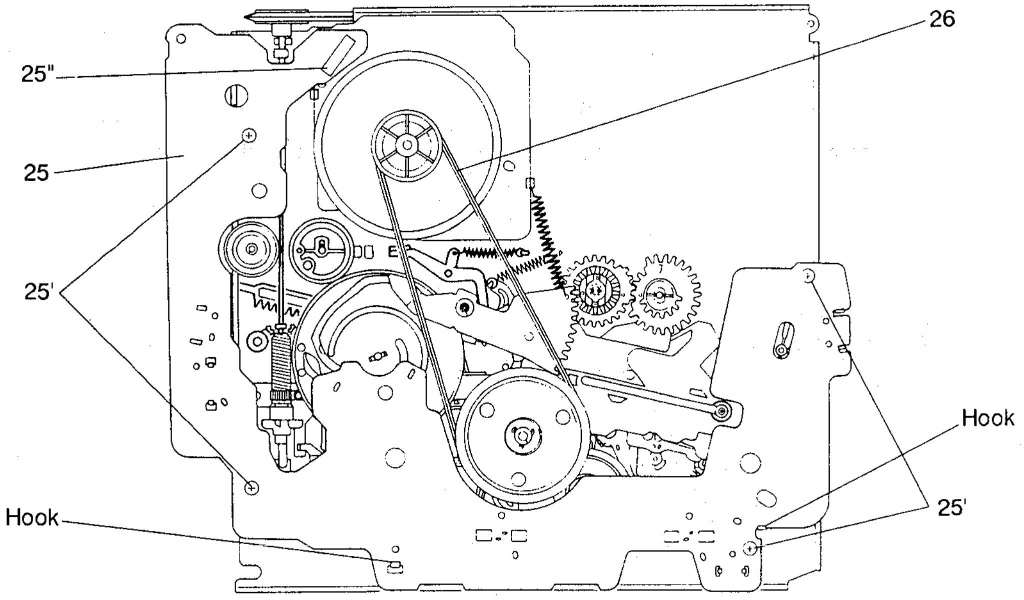

26
25"
25
25'
Hook
Hook
25'

Fig. 2-4-15

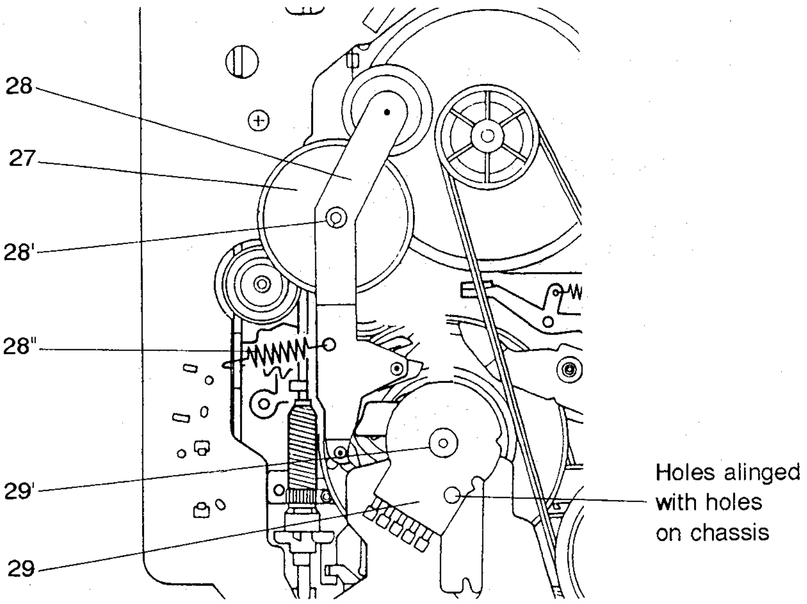

28
27
28'
28"
29'
29
Holes alinged
with holes
on chassis

Fig. 2-4-16

2. Reassembling upper mechanism assembly parts

1) Install the Pinch Roller Lever and engage the tension spring (1').
2) Install the Pinch Roller Cam so that the marking matches with that of the Relay Cam. At that time, the two holes of the Pinch Roller Cam and the chassis should not match completely with each other but overlap by half as shown in the figure below.
3) Set in the compression spring (3") and install the Pinch Roller Arm Assembly so that the stud of the Pinch Roller Lever is positioned in the elliptical groove of the Pinch Roller Assembly, then engage the slit washer (3').

No.	Part name
1	Pich roller lever
1'	Tension spring
2	Pinch roller cam

Table 2-4-15

No.	Part name
3	Pinch roller arm assembly
3'	Slit washer
3"	Compression spring

Table 2-4-16

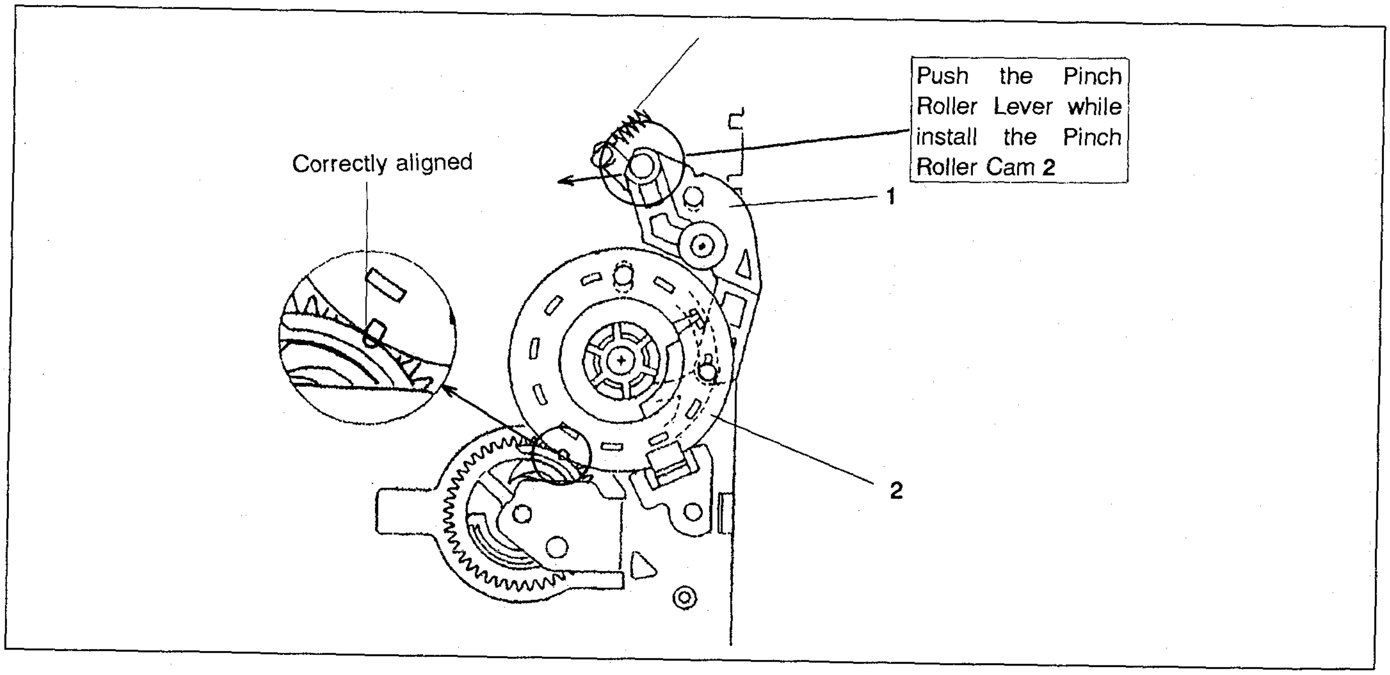

Correctly aligned
Push the Pinch Roller Lever while install the Pinch Roller Cam 2
1
2

Fig. 2-4-17

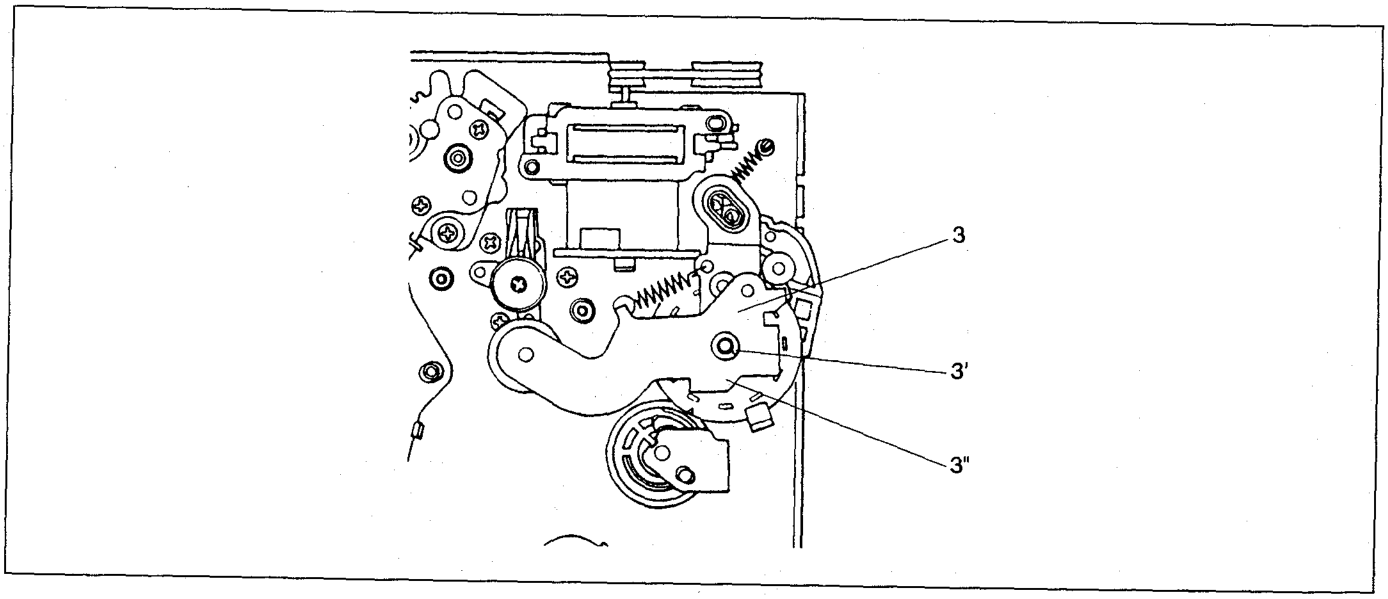
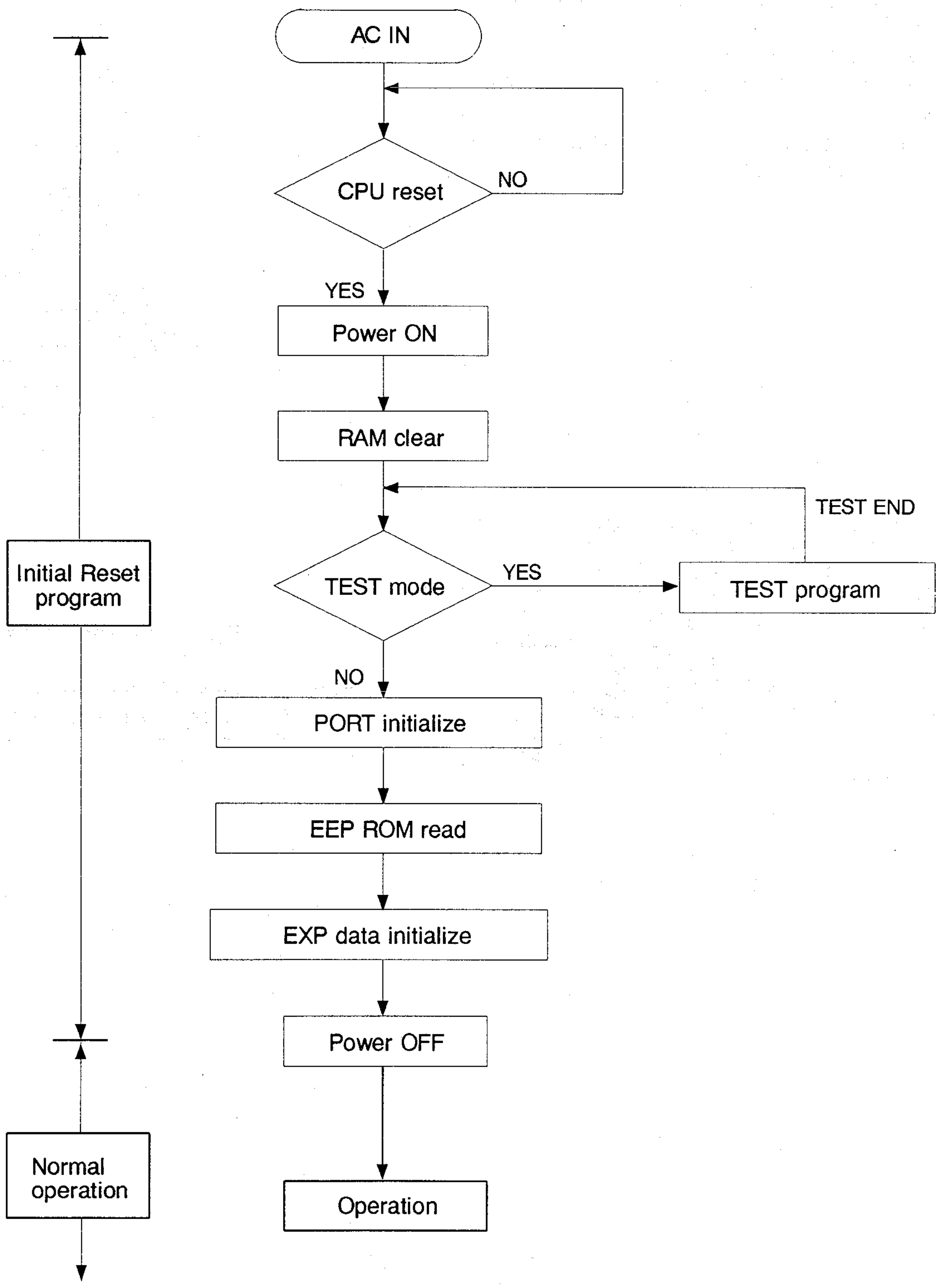


Fig. 2-4-18

2.5 Quick advice

1. Check of faulty mechacon CPU

The following flowchart shows the initial reset program executed by the CPU just after AC power is supplied.
If this program is not executed normally, the set may be completely inoperable or may malfunction. Some faults can be traced to the failure of this program to execute normally, but in general the reason for this is not the CPU but in the external components.
This is especially so in recent models such as this in which information from operation switches and sensors is transmitted to the CPU through an input expander IC. In the event of the fault, it will therefore be necessary to check the expander IC, EEPROM IC etc. in addition to the usual checks on Vcc, crystal etc.


AC IN
CPU reset
NO
YES
Power ON
RAM clear
TEST END
TEST mode
YES
TEST program
NO
PORT initialize
EEP ROM read
EXP data initialize
Power OFF
Operation
Initial Reset program
Normal operation

2.6 MAIN PARTS REPLACEMENT AND ADJUSTMENT

2.6.1 Stator assembly

1) Expand the hook in the direction indicated by the arrow and remove the Cleaner Assembly.
2) Take out 1 screw (D), then remove the Earth Plate.
3) Take out 2 screws (A).
4) Raise the Stator Assembly in the direction indicated by the arrow to remove it (also remove the Inertia Roller).
5) Remove the flat cable.
6) To install, first secure the flat cable, then insert 2 screws (A).
7) After installing, be sure to perform switching point adjustment.

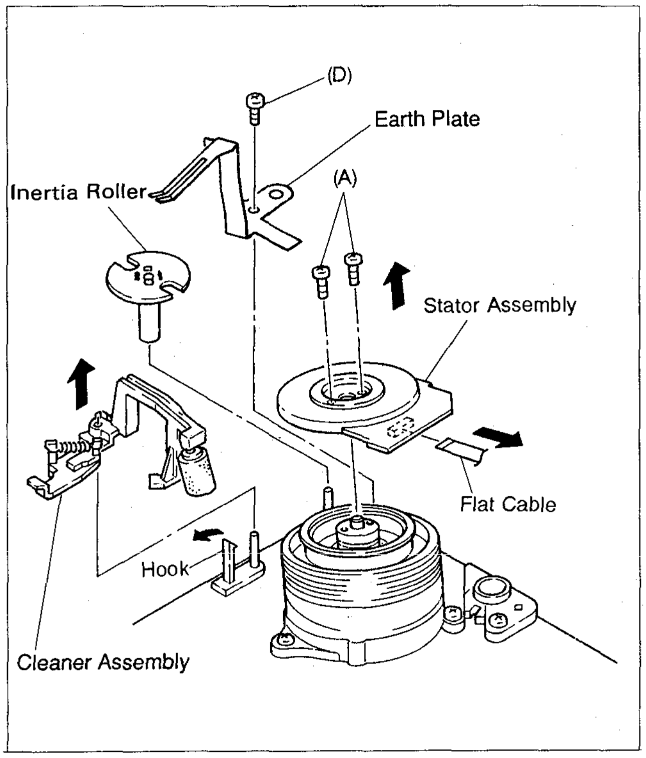

(D)
Earth Plate
Inertia Roller
(A)
Stator Assembly
Flat Cable
Hook
Cleaner Assembly

Fig. 2-6-1 Stator assembly

2.6.2 Rotor assembly

1) Remove the Cleaner Assembly, Earth Plate and Stator Assembly.
2) Take out 2 screws (B) and remove the Rotor Assembly.

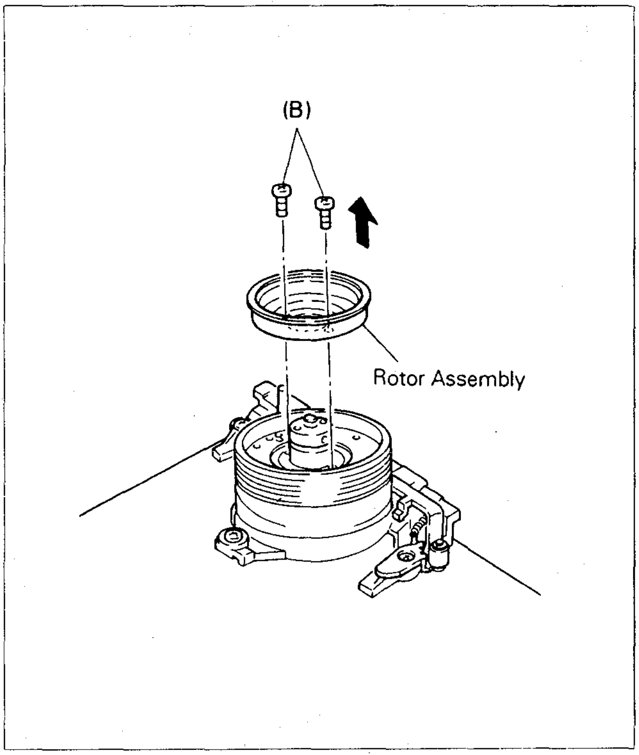

(B)
Rotor Assembly

Fig. 2-6-2 Rotor assembly-1

Note: *A normal picture will not be obtained unless the phase is properly aligned when installing the Rotor Assembly.*

3) Align the Upper Drum and Rotor Assembly phase as indicated in Fig. 2-6-3.
4) Overlap holes (a) of the Upper Drum with holes (b) of the Rotor Assembly and secure with 2 screws (B) (see Fig. 2-6-2).

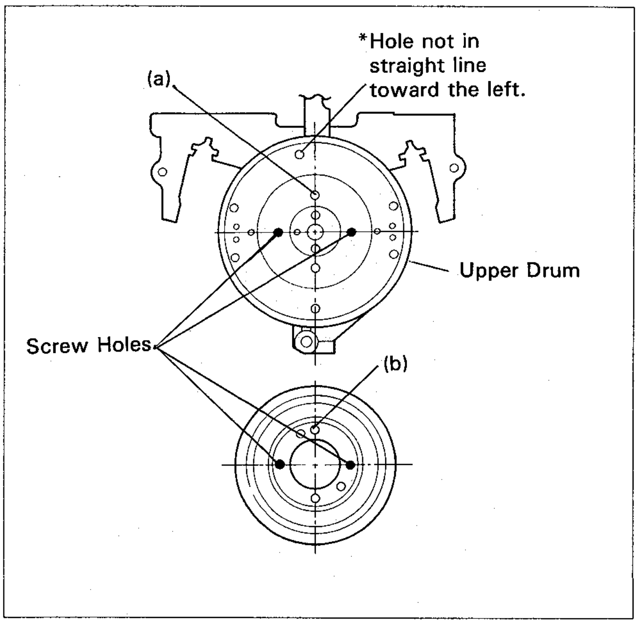

*Hole not in straight line toward the left.
(a)
Upper Drum
Screw Holes
(b)

Fig. 2-6-3 Rotor assembly-2

2.6.3 Drum sub assembly

1) Disengage the PRE/REC AMP board connector and flat cable.
2) Take out 3 screws (C) and remove the Drum Sub Assembly.

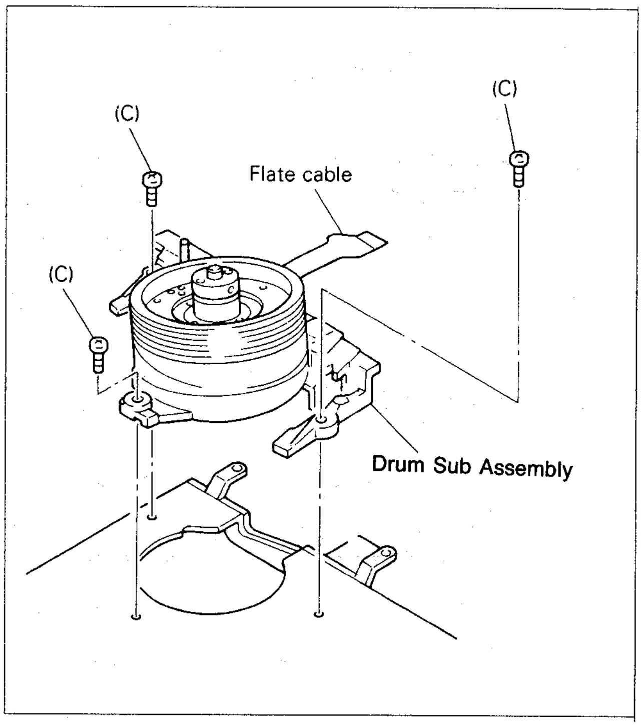

(C)
(C)
Flate cable
(C)
Drum Sub Assembly

Fig. 2-6-4 Drum sub assembly

2.6.4 Upper Drum assembly

1. Removal

1) Remove the Stator and Rotor Assemblies.
2) Use a 1.5 mm hexagonal wrench to loosen the Collar Assembly screw and remove the Collar Assembly.
3) Remove the Upper Drum Assembly and use tweezers to remove the Washer.

Note: ***If the Brush is replaced, do not apply the grease to the contacts.***

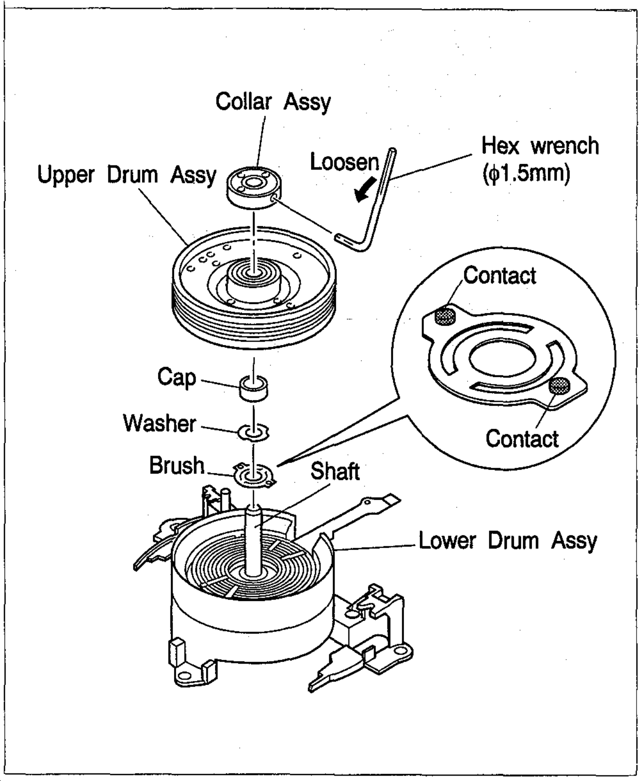

Collar Assy
Upper Drum Assy
Loosen
Hex wrench
(ϕ1.5mm)
Contact
Cap
Washer
Brush
Shaft
Contact
Lower Drum Assy

Fig. 2-6-5 Upper drum assembly-1

2. Installation

1) Use an air brush to clean the Lower Drum Assembly and the coil section of the new Upper Drum Assembly.
2) Set a new Washer and Upper Drum Assembly on the Drum shaft (see Fig. 2-6-5).

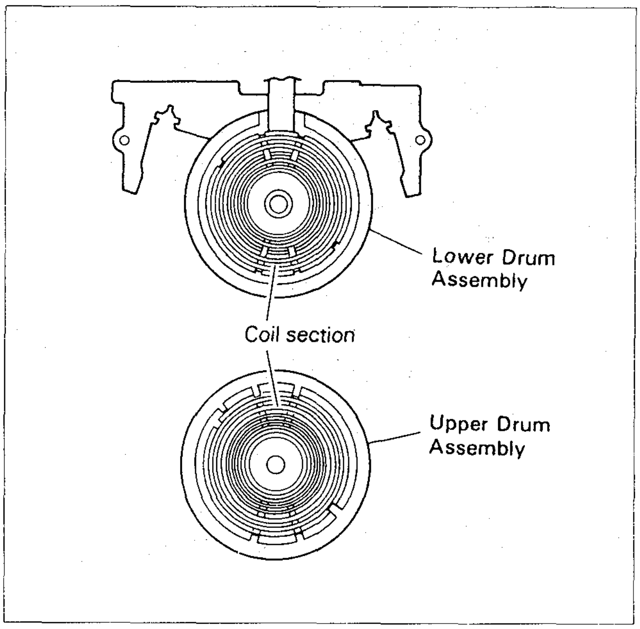

Lower Drum Assembly
Coil section
Upper Drum Assembly

Fig. 2-6-6 Upper drum assebly-2

3) Note the top and bottom of the Collar Assembly and determine the position as indicated in Fig. 2-6-7.

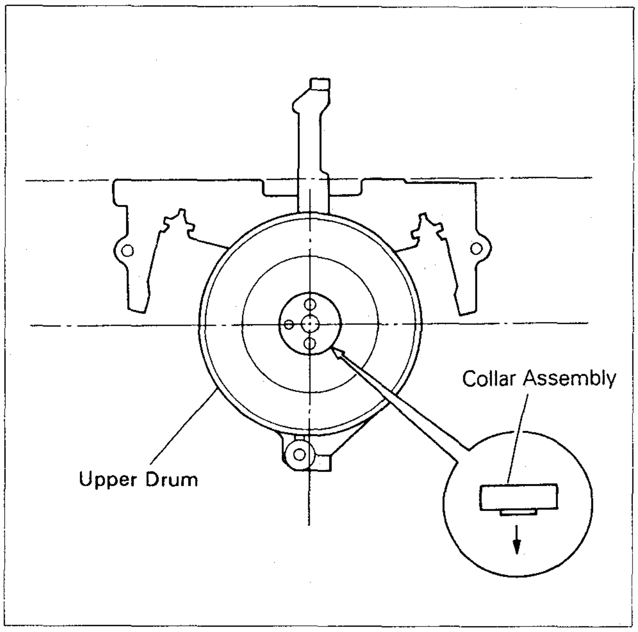

Collar Assembly
Upper Drum

Fig. 2-6-7 Collar assembly-1

4) While pressing the Collar Assembly evenly from above with the fingertips, secure the hexagonal screw.

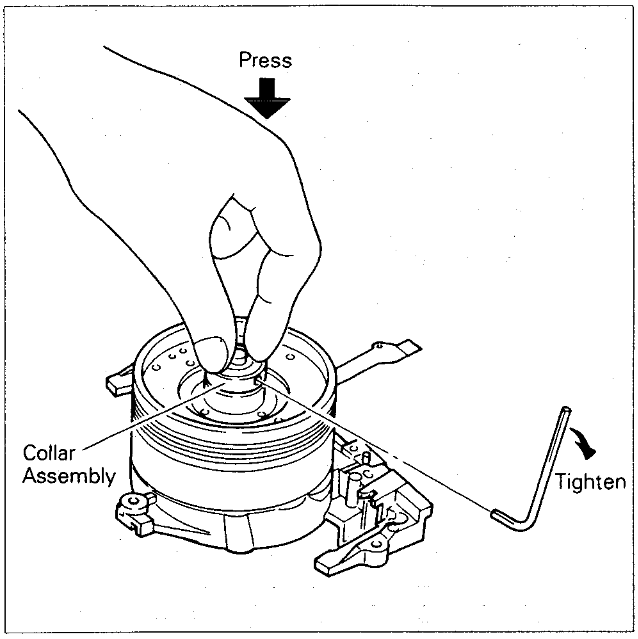

Press
Collar Assembly
Tighten

Fig. 2-6-8 Collar assembly-2

5) After installing, gently turn the Upper Drum by hand and confirm normal rotation.
6) Install the Rotor and Stator Assemblies.
7) Clean the Upper and Lower Drum Assemblies and perform the following adjustments;
   - •Switching Point Adjustment
   - •Interchangeability Adjustment (be sure to check LP mode)
   - •Recording colour level Adjustment

2.6.5 A/C head

1. Removal

1) Take out 2 screws ① and remove the A/C head arm assembly.

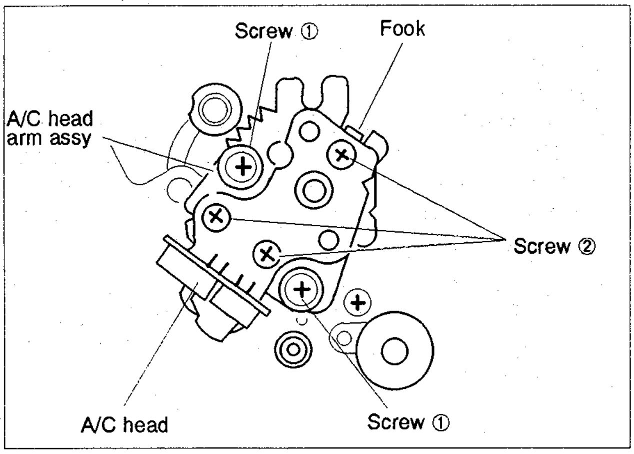

Screw ①
Fook
A/C head arm assy
Screw ②
A/C head
Screw ①

Fig. 2-6-9 A/C head replacement-1

2) When replacing the A/C head only, remove 3 screws ②, use care not to misplace the 3 springs.

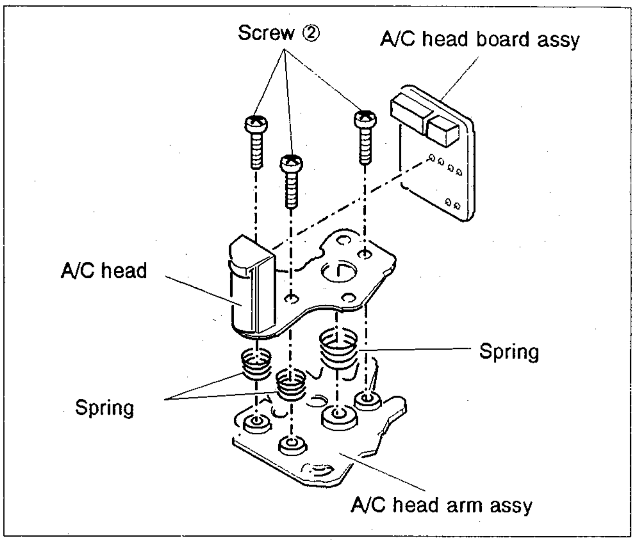

Screw ②
A/C head board assy
A/C head
Spring
Spring
A/C head arm assy

Fig. 2-6-10 A/C head replacement-2

2. Installation

1) Temporarily set the A/C head height as indicated in Fig. 2-6-11.

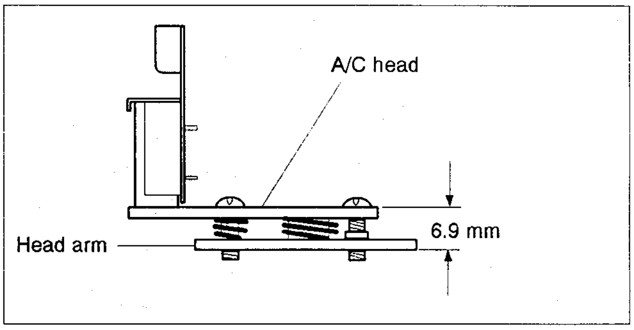

A/C head
Head arm
6.9 mm

Fig. 2-6-11 A/C head height

Notes: • *It is very important to correctly adjust the control pulse and audio signal in addition to the mechanical tape path.*

• *Perform interchangeability adjustments after electrical adjustments.*

2.7 TAPE INTERCHANGEABILITY ADJUSTMENT

Note: *This adjustment is extremely important. However, it is normally not required during routine service. Perform only after replacing major components (A/C head, drum assembly, etc.).*

2.7.1 Tilt adjustment of A/C head

1) Use blank tape and set for playback.
2) Turn 1 screw ① clockwise to where the tape curls just slightly at the take-up guide pole bottom flange, as shown in Fig. 2-7-1.
3) Then slowly turn screw ① counter-clockwise to where the curling ceases.

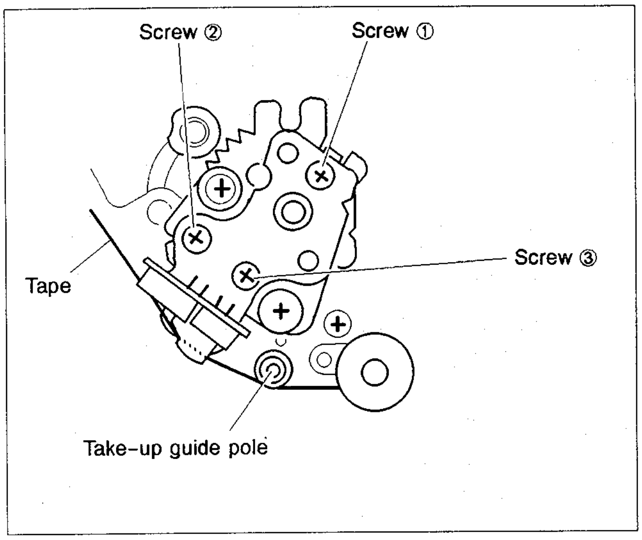


Fig. 2-7-1 A/C head tilt adjustment

2.7.2 Azimuth adjustment of A/C head

1) Connect the oscilloscope to the audio output jack on the rear of the deck.
2) Playback the stairstep portion (6 kHz, Mono) of the alignment tape.
3) Adjust 1 screw ② on the A/C head arm assembly in Fig. 2-7-1 so that the audio output is both maximum and with minimum fluctuation.

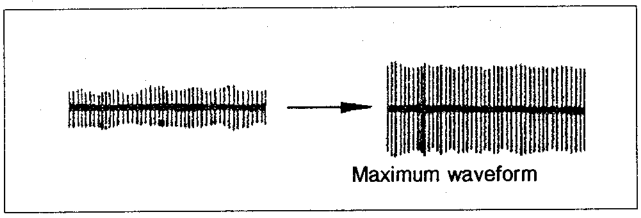


Fig. 2-7-2 A/C head azimuth adjustment

2.7.3 Height adjustment of A/C head

1) Playback the blank tape and observe the control head area.
2) Turn screws ①, ② and ③ by small and equal increments (about 45° at a time) to adjust the A/C head height so that equal amounts of head core can be seen, by both core erea as shown in Fig. 2-7-3 (upper core of the audio erase head and bottom core of the control head).
3) Check the azimuth adjustment (2.7.2), if necessary adjust it.

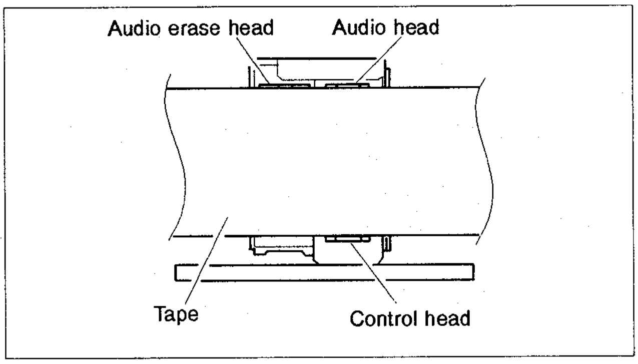


Fig. 2-7-3 A/C head height adjustment

2.7.4 Phase (X-value) adjustment of A/C head

1) Playback the stairstep portion of the alignment tape [MHPE].
2) Connect the oscilloscope to TP6 (PB FM) on the PRE/REC board. Use TP411 (DRUM FF) on the MAIN board as a trigger. Confirm that the FM waveform appears, as in Fig. 2-7-5.
3) Set the neutral manual tracking position, by simultaneously press of the (∧) and (∨) TV PROG buttons.
4) If adjustment is required, slightly loosen screws ④ and ⑤. Set A/C head positioning tool on the A/C head adjusting boss as shown in Fig. 2-7-4.
5) Turn the tool first to position the A/C head fully toward the capstan. Then gradually return it toward the drum and stop at the position of maximum FM waveform output level as shown in Fig. 2-7-5.
6) Tighten screw ⑤. Remove the tool and tighten screw ④.
7) Eject the tape and then re-insert alignment tape [MHPE-L]. Playback the stairstep of the alignment tape. Set the neutral manual tracking position.
8) Confirm maximum playback FM waveform outut level as shown in Fig. 2-7-5.
9) If not maximum, slightly loosen the screws ④ and ⑤. Use the tool and adjust the head position for the nearest maximum point. Then tighten screws ④ and ⑤.

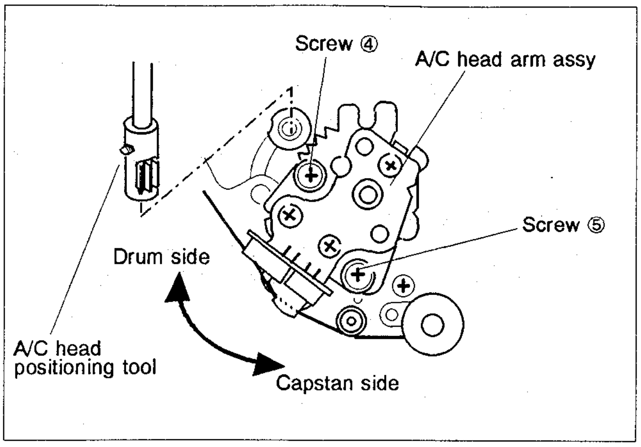


Fig. 2-7-4 A/C head phase adjustment-1

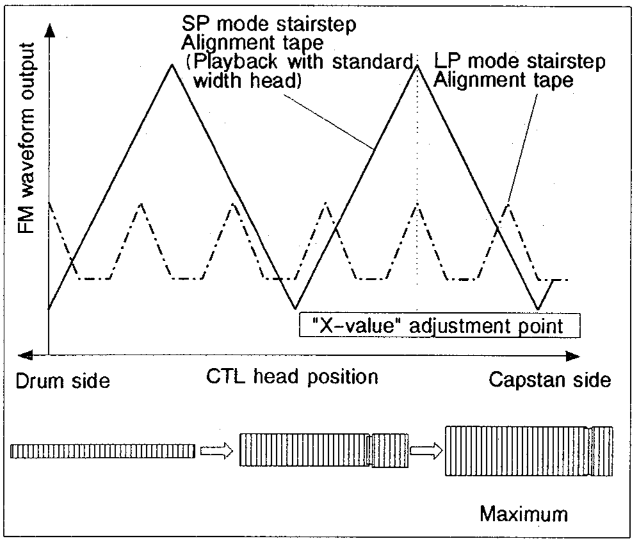


Fig. 2-7-5 A/C head phase adjustment-2

2.7.5 LP mode auto tracking

1) Playback the stairstep of the alignment tape [MHPE-L].
2) Confirm that the Automatic tracking LED stops flashing and remains on.
3) Press the "D" button of the preseting unit [PTU94008] to turn off the Automatic tracking LED.
4) Press the "D" button again to change the mode to the LP interchangeability adjustment mode and confirm that the Automatic tracking LED stops flashing and goes off.

Note: *When the MHPE-L alignment tape is automatically ejected from the cassette housing, repeat the above adjustment (phase adjustment of A/C head, sec. 2.7.4).*

2.7.6 Tension pole position

1) Turn the eccentric adjust pin for the notch of the pin with the mark as shown in Fig. 2-7-6.
2) Set the cassette housing assembly. Use the back tension cassette gauge and set for the playback mode.
3) Confirm reading of 27 to 48 g•cm.

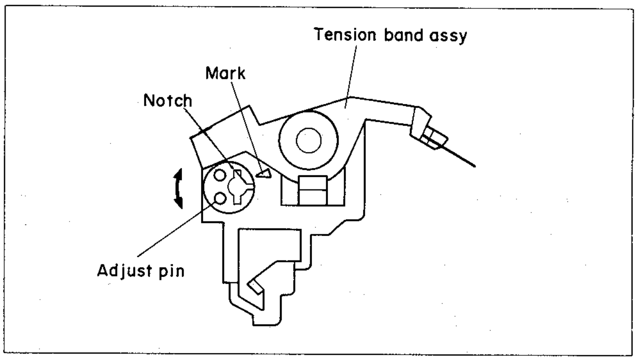


Fig. 2-7-6 Tension pole position

2.7.7 Clutch assembly adjustment

1) Remove cassette housing and set for playback mode (Refer to sec. 2.1.2).
2) Set torque gauge on the take-up reel disk. Gradually relax your grip on the gauge and read the needle indication at the point the gauge begins to rotate with the disk. Confirm indication of 60 to 100 g•cm.

2.7.8 SUP/TU pole base adjustment

This is the most important adjustment. If incorrect, proper tracking will not be obtained in recording and playback.

Other problems that may occur are noise in parts of the picture, poor colour reproduction and picture instability.

1) Playback the stairstep portion of the alignment tape [MHPE].
2) Connect the oscilloscope to TP6 (PB FM) on the PRE/REC board. Use TP411 (DRUM FF) on the MAIN board as a trigger. Confirm that the FM waveform appears, as in Fig. 2-5-9.
3) Operate the tracking adjustment (press the tracking buttons during playback) and set for maximum playback FM waveform.
4) If adjustment is required, first slightly loosen the set screw located at the bottom of the guide rollers. Using the guide roller adjustment tool, adjust the supply and take-up guide rollers (refer to Fig. 2-7-8) to obtain the correct waveform. Refer to Fig. 2-7-9.

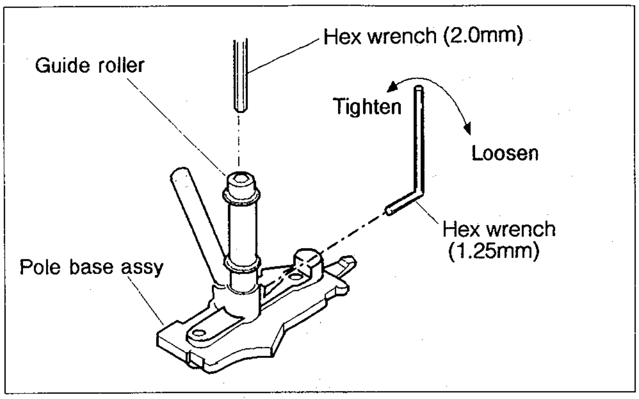

Hex wrench (2.0mm)
Guide roller
Tighten
Loosen
Hex wrench (1.25mm)
Pole base assy

Fig. 2-7-8 SUP/TU pole base assembly

5) By pushing the tracking buttons several times, vary the FM waveform output from maximum to minimum (and vice versa) gradually, and confirm that the variation proceeds in a flat shape, as in Fig. 2-7-10.
6) If the FM waveform varies and is not mostly flat, tweak the height of guide roller (s) until the waveform is as flat as possible.
7) Eject a tape and then playback tape again, since the height of guide rollers may move during adjustment. Confirm, when pushing the tracking (+) and (−) buttons, FM waveform variation is always flat.

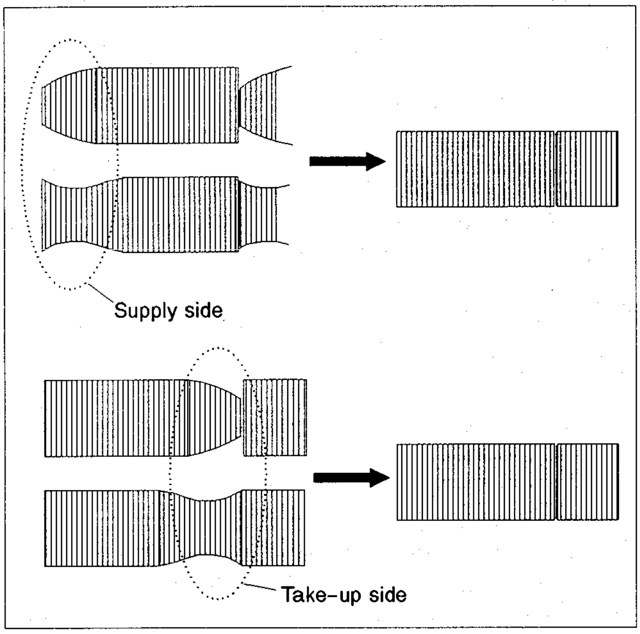

Supply side
Take-up side

Fig. 2-7-9 FM waveform -1

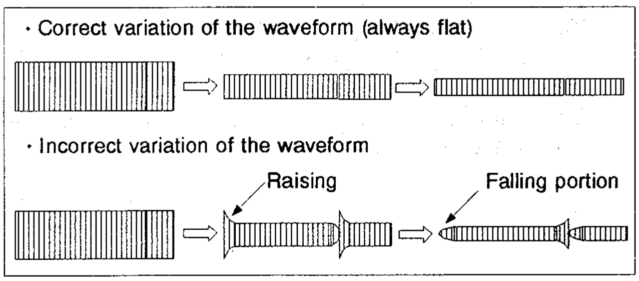

· Correct variation of the waveform (always flat)
· Incorrect variation of the waveform
Raising
Falling portion

Fig. 2-7-10 FM waveform -2

2.7.9 Tape transport system confirmation

1) Use a 140-minute or more long tape and check at the tape beginning and ending portion according to the following steps.
2) Confirm absence of curling, wrinkling, slippage, etc at the (a), (b), (c) and (d) portions, as shown in Fig. 2-7-11.
3) If curling or winkling are observed during the above checks, perform the steps 2.7.1 to 2.7.8.

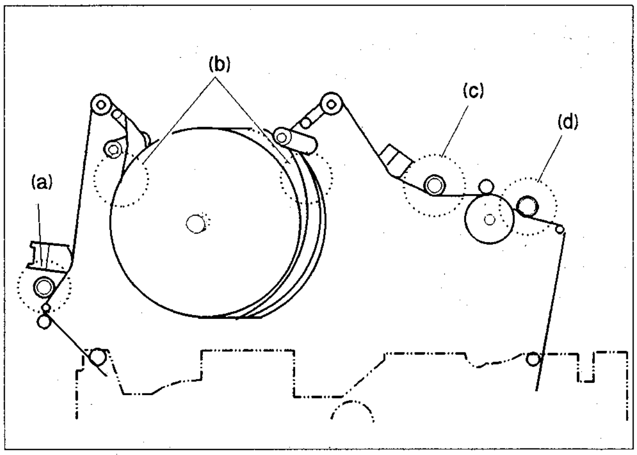


Fig. 2-7-11 Tape transport system

SECTION 3
ELECTRICAL ADJUSTMENT

3.1 PRECAUTION

Electrical adjustments are required after replacing circuit components and certain mechanical parts.
It is important to perform these adjustments only after all repairs and replacements have been completed. Also, do not attempt these adjustments unless the proper equipments is available.

3.1.1 Required test equipment

1. Colour television or monitor
2. Osciloscope: wide-band, dual-trace, triggered delayed sweep
3. Frequency counter
4. Audio oscillator
5. AC millivoltmeter
6. Digital voltmeter
7. Signal generator: RF/IF sweep/marker
8. Signal generator: PAL colour bar
9. Recording tape

3.1.2 Required adjustment tools

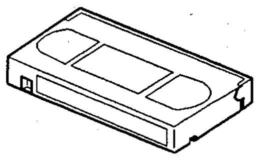
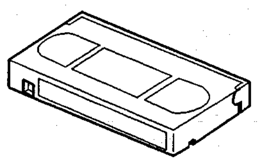
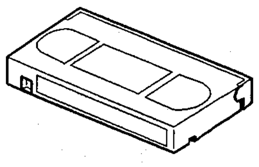
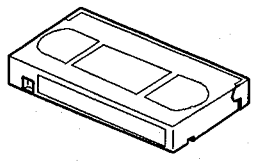
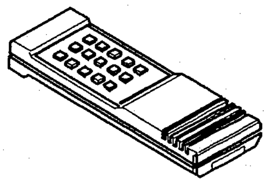
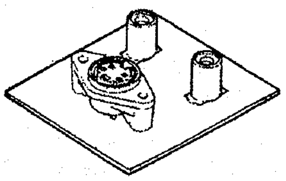
Alignment tape (SP, stairstep) MHPE	Alignment tape (SP, colour bar) MHVE-2
	
Alignment tape (S-VHS) MH-2H	Alignment tape (FM AUDIO) MH-F2
	
Presetting unit PTU94008	RCA-S Adapter PTU93001A
	

Table 3-1-1 Required adjustment tools

3.1.3 Colour bar signal, colour bar pattern and video sweep signal

- SECAM colour bar signal waveform

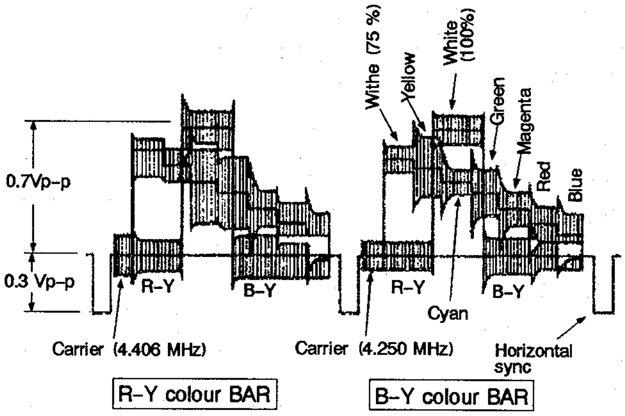

Withe (75 %)
Yellow
White (100%)
Green
Magenta
Red
Blue
0.7Vp-p
0.3 Vp-p
R-Y
B-Y
R-Y
Cyan
B-Y
Carrier (4.406 MHz)
Carrier (4.250 MHz)
Horizontal sync
R-Y colour BAR
B-Y colour BAR

Fig. 3-1-1 SECAM colour bar signal waveform

- PAL colour bar signal waveform

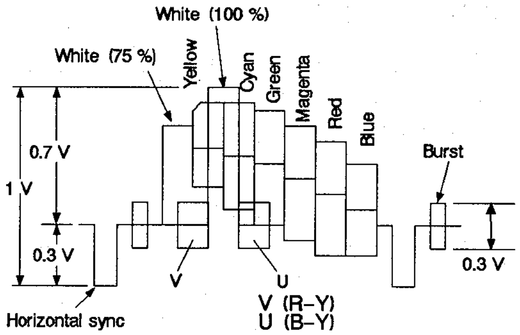

White (100 %)
White (75 %)
Yellow
Cyan
Green
Magenta
Red
Blue
Burst
0.7 V
1 V
0.3 V
0.3 V
V
U
Horizontal sync
V (R-Y)
U (B-Y)

Fig. 3-1-2 PAL Colour bar signal waveform

- PAL colour bar pattern

(75 %) →

White	Yellow	Cyan	Green	Magenta	Red	Blue
V	U	White 100%			Black	

Fig. 3-1-3 PAL colour bar pattern

- Video sweep signal

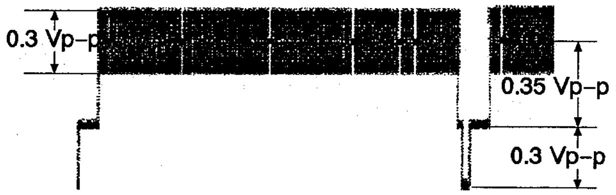

0.3 Vp-p
0.35 Vp-p
0.3 Vp-p

Fig. 3-1-4 Video sweep signal

3.2 SWITCHING REGULATOR CIRCUIT

Note: *Unless otherwise specified, all measurement points and adjustment parts are located on the SWITCHING REGULATOR BOARD.*

3.2.1 5V DC OUTPUT VOLTAGE

Signal	•AUX •TUNER
Mode	•REC : SP
Equipment	•Digital voltmeter
Measurement point	•CN3 pin 6 (SWD 5 V) •CN3 pin 5 (GND)
Adjustment part	•R34 (SWD 5 V)
Specification	•5.30 ± 0.05 V DC

(1) Connect a digital voltmeter to pin 6 of CN3 (SWD 5V) and pin 5 of CN3 (GND).

(2) Adjust R34 for 5.30 ± 0.05 V DC.

3.3 SERVO CIRCUIT

Note: *Unless otherwise specified, all measurement points and adjustment parts are located on the MAIN BOARD.*

3.3.1 PB SWITCHING POINT

Signal	•Alignment tape (MHPE) •Stairstep
Mode	•PB •Automatic tracking : OFF
Equipment	•Oscilloscope
Measurement point	•TP10 (VIDEO OUT) [TERMINAL board]
Trigger slope (-)	•TP411 (DRUM FF)
Adjustment tool	•Presetting unit [PTU94008]
Specification	•6.5 ± 0.5 H

Note: *Set VCR to the mode A by remote controller.*

(1) Connect an oscilloscope to TP10 and TP411.

(2) Playback the stairstep signal of the alignment tape.

(3) Set the tracking control to the centre position by simultaneously pressing the TV PROG (Λ) and (V) buttons.

(4) Adjust by pressing "E" or "F" buttons of the presetting unit for position the trigger point 6.5 ± 0.5 H from V.sync.

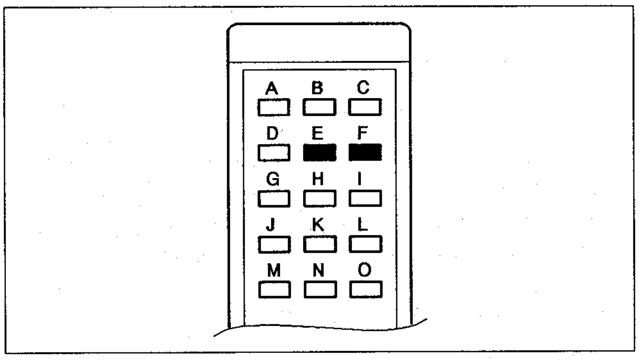


Fig. 3-3-1 Presetting unit

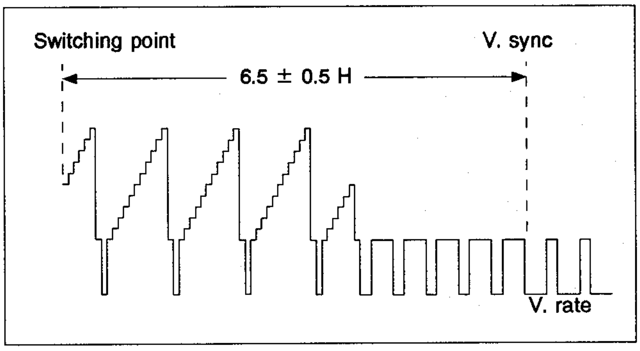


Fig. 3-3-2 PB switching point

3.3.2 SLOW TRACKING PRESET

Signal	•Colour bar or tuner
Mode	•REC → PB (SLOW) •SP/LP
Equipment	•TV-Monitor
Adjustment tool	•Presetting unit [PTU94008]
Specification	•Mimimum noise

Note: *Set VCR to the mode A by remote controller.*

(1) Record a colour bar signal in the SP mode.

(2) Playback recorded signal on the FWD slow mode.

(3) Observe the display on a TV monitor and adjust for optimum noise condition (best tracking) by depressing "C" or "B" buttons of the presetting unit as required.

(4) Depress the STOP button.

(5) Confirm that the bar noise is not visible on the monitor in the slow mode.

(6) Repeat steps (2) to (5) in REV slow mode.

(7) Repeat steps (1) to (6) in LP mode.

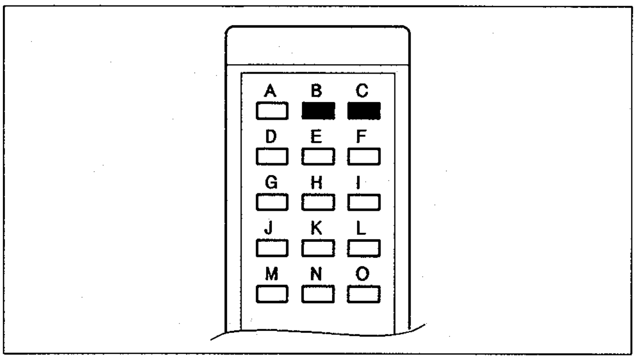

A
B
C
D
E
F
G
H
I
J
K
L
M
N
O

Fig. 3-3-3 Presetting unit

3.4 VIDEO CIRCUIT

Notes:
- *Unless otherwise specified, all measurement points and adjustment parts are located on the MAIN BOARD.*
- *VIDEO circuit adjustments are performed by the EVR system by use of the presetting unit and numeric-key remote controller.*
- *S-INPUT means Y/C separated video signal in the chart.*
- *Set VCR to the mode A by remote controller.*

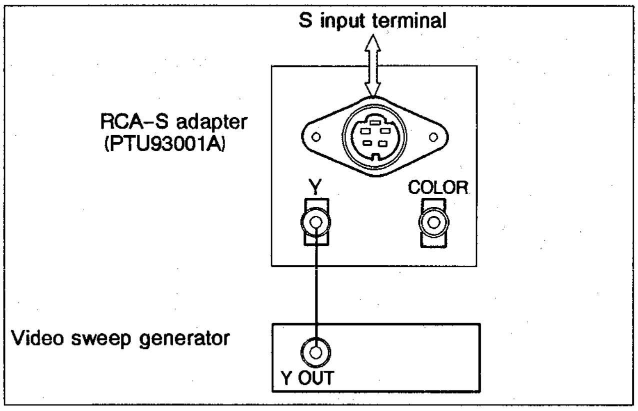

S input terminal
RCA-S adapter
(PTU93001A)
Y
COLOR
Video sweep generator
Y OUT

Fig. 3-4-1 S input connection

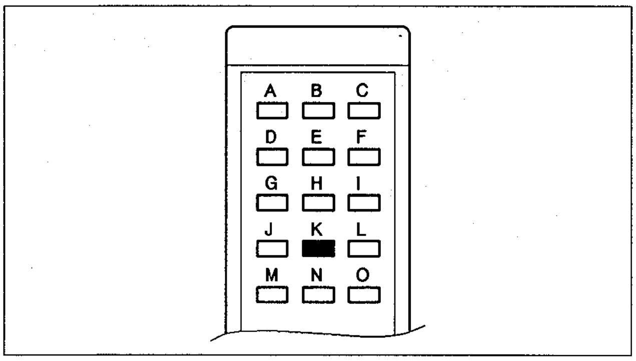

A
B
C
D
E
F
G
H
I
J
K
L
M
N
O

Fig. 3-4-2 Presetting unit

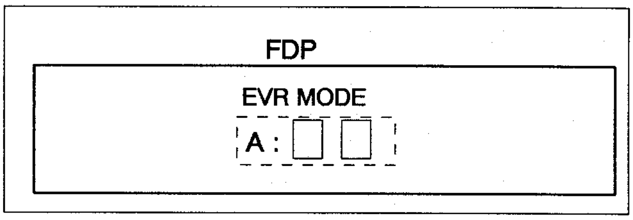

FDP
EVR MODE
A :

Fig. 3-4-3 EVR mode (FDP)

3.4.1 EE Y LEVEL

Signal	•Colour bar
Mode	•EE •S-VHS
Equipment	•Oscilloscope
Measurement point	•TP20 (Y OUT) 〔TERMINAL BOARD〕
Adjustment tool	•Presetting unit [PTU94008] •Remoto controller
EVR mode	•A : 11
Specification	•2.00 ± 0.06 Vp-p (Unterminated)

(1) Connect an oscilloscope to TP20 of the TERMINAL board.

(2) Set EVR mode by pressing "K" button of the presetting unit more than 3 seconds.

(3) Set "A : 11" by pressing ① numeric key twice of the remote controller.

(4) Adjust TV PROG "V" "Λ" button for 2.00 ± 0.06 Vp-p as shown in Fig. 3-4-4.

(5) Set normal VCR mode by pressing "K" button so adjustment data is memorized.

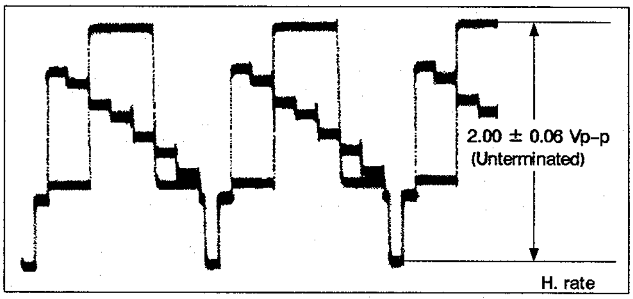


Fig. 3-4-4 EE Y level

3.4.2 DIGITAL I/O LEVEL

Signal	•Colour bar
Mode	•EE •S-VHS
Equipment	•Oscilloscope
Measurement point	•TP251 (Y/V) •TP223 (SEPAD Y)
Adjustment tool	•Presetting unit [PTU94008] •Remote controller
EVR mode	•A : 6
Specification	•Equal levels

(1) Connect one channel (CH-1) of a dual trace oscilloscope to TP251 and the other channel (CH-2) to TP223.

(2) Set the oscilloscope for ALT mode, and overlap the waveform.

(3) Set EVR mode by pressing "K" button of the presetting unit more than 3 seconds.

(4) Set "A : 6" by pressing ⑥ numeric key of the remote controller.

(5) Adjust TV PROG "V ""Λ" button for equal Y levels.

(6) Set normal VCR mode by pressing "K" button again so adjustment data is memorized.

3.4.3 S-VHS PB Y LEVEL

Signal	•Colour bar
Mode	•REC → PB : SP •S-VHS
Equipment	•Oscilloscope
Measurement point	•TP20 (Y OUT) [TERMINAL board]
Adjustment tool	•Presetting unit [PTU94008] •Remote controller
EVR mode	•A : 11
Specification	•2.00 ± 0.06 Vp-p (Unterminated)

(1) Connect an oscilloscope to TP20 of the TERMINAL board.

(2) Set EVR mode by pressing "K" button of the presetting unit more than 3 seconds.

(3) Set "A : 11" by pressing ① numeric key twice of the remote controller.

(4) Record a colour bar signal then play it back.

(5) Adjust TV PROG "V " "Λ " button for 2.00 ± 0.06 Vp-p as shown in Fig. 3-4-5.

(6) Set normal VCR mode by pressing "K" button again so adjustment data is memorized.

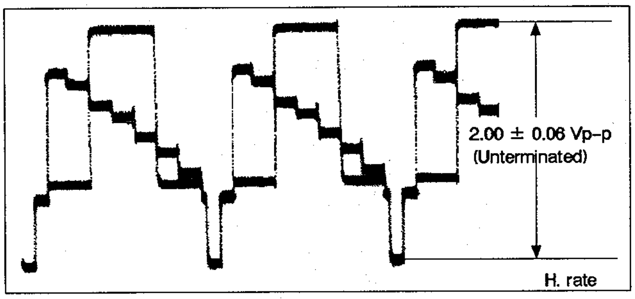


Fig. 3-4-5 S-VHS PB Y level

3.4.4 VHS PB Y LEVEL

Signal	•Colour bar
Mode	•REC → PB : SP •VHS
Equipment	•Oscilloscope
Measurement point	•TP20 (Y OUT) [TERMINAL board]
Adjustment tool	•Presetting unit [PTU94008] •Remote controller
EVR mode	A : 11
Specification	•2.00 ± 0.06 Vp-p (Unterminated)

(1) Connect an oscilloscope to TP20 of the TERMINAL board.

(2) Set EVR mode by pressing "K" button of the presetting unit more than 3 seconds.

(3) Set "A : 11" by pressing ① numeric key twice of the remote controller.

(4) Record a colour bar signal then play it back.

(5) Adjust TV PROG "V " "Λ " button for 2.00 ± 0.06 Vp-p as shown in Fig. 3-4-6.

(6) Set normal VCR mode by pressing "K" button again so adjustment data is memorized.

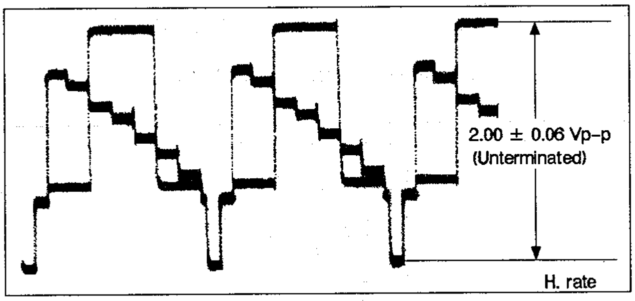


Fig. 3-4-6 VHS PB Y level

3.4.5 S-VHS VIDEO EQ

Signal	•S input •Video sweep
Mode	•REC → PB : SP/LP •S-VHS •EDIT SW : OFF (REC) : ON (PB)
Equipment	•Oscilloscope
Measurement point	•TP20 (Y OUT) 〔TERMINAL board〕
Adjustment tool	•Presetting unit [PTU94008] •Remote controller
EVR mode	•A : 3
Specification	•3.6 ± 0.2 scale (SP) •2.8 ± 0.2 scale (LP)

(1) Connect an oscilloscope to TP20 of the TERMINAL board.

(2) Set EVR mode by pressing "K" button of the presetting unit more than 3 seconds.

(3) Set "A : 3" by pressing ③ numeric key of the remote controller.

(4) Record a video sweep signal in S-VHS SP mode, then play it back.

(5) If the sweeper's 100 kHz marker frequency is for 4 scale divisions on the oscilloscope screen, adjust TV PROG "V" "Λ" button so that 3 MHz marker level becomes 3.6 ± 0.2 scale divisions.

(6) Record a video sweep signal in S-VHS LP mode, then play it back.

(7) If the sweeper's 100 kHz marker frequency is for 4 scale divisions on the oscilloscope screen, adjust TV PROG "V" "Λ" button so that 3 MHz marker level becomes 2.8 ± 0.2 scale divisions.

(8) Set normal VCR mode by pressing "K" button again so adjustment data is memorized.

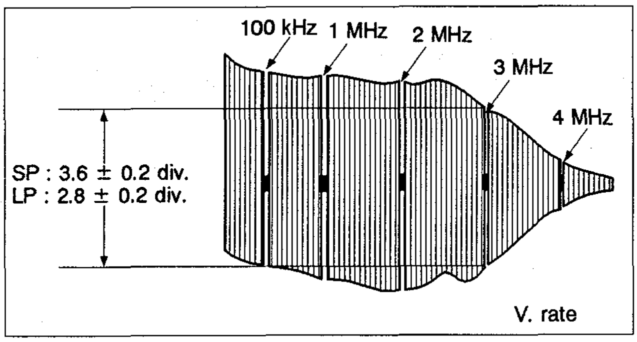


Fig. 3-4-7 S-VHS VIDEO EQ

《Alternate method》

(1) Record a colour bar signal in S-VHS SP mode.

(2) Play it back to observe the picture and adjust TV PROG "V" "Λ" button for best resolution, without impaired S/N.

(3) So after adjustment, confirm black or white spot.

(4) Record a colour bar signal in S-VHS LP mode.

(5) Play it back to observe the picture and adjust TV PROG "V" "Λ" button for best resolution, without impaired S/N.

(6) So after adjustment, confirm black or white spot.

3.4.6 SECAM DETECT

Signal	•SECAM colour bar
Mode	•EE
Equipment	•Oscilloscope
Measurement point	•TP244 (SECAM DETECT)
Adjustment part	•LC201 (SECAM DETECT)
Specification	•a:b = 1:1

(1) Connect an oscilloscope to TP244.

(2) Adjust LC201 so that A and B are related as follows: a:b = 1:1.

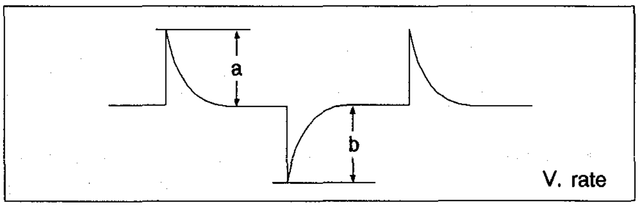


Fig. 3-4-8 SECAM detect

3.4.7 REC COLOUR LEVEL

Signal	•Colour bar
Mode	•PB (MH-2H) •Colour bar •REC → PB : SP / LP •S-VHS
Equipment	•Oscilloscope
Measurement point	•PB colour out
Trigger slope (-)	•TP411 (DRUM FF)
Adjustment tool	•Presetting unit [PTU94008] •Remote controller
EVR mode	•A : 2
Specification	•120 ± 5 % : SP •100 ± 5 % : LP

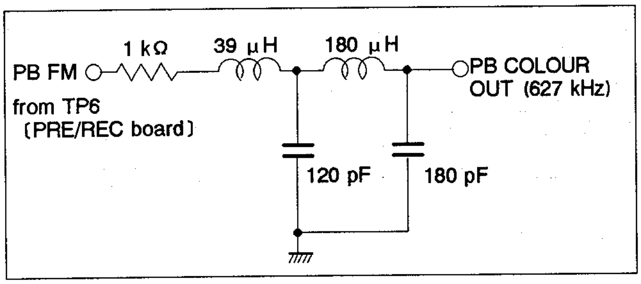


Fig. 3-4-9 LPF

(1) Use a LPF as shown in Fig. 3-4-9.

(2) Playback the SP (LP) colour bar signal of MH-2H alignment tape.

(3) Set the tracking of the Front panel to the Auto tracking off position by simultaneously pressing the "V" "Λ" TV PROG buttons.

(4) Adjust by pressing the "V" "Λ" TV PROG buttons of the Front panel for maximum level of the colour waveform and make a note of the higher colour level "B".

(5) Press the STOP/EJECT button and eject the MH-2H alignment tape.

(6) Set EVR mode by pressing "K" button of the presetting unit more than 3 seconds.

(7) Set "A : 2" by pressing ② numeric key of the remote controller.

(8) Record a colour bar signal in SP (LP) mode, and playback recorded colour bar signal.

(9) Before recording, adjust TV PROG "V" "Λ" button so that the higher level channel becomes 120 ± 5 % : SP (100 ± 5 % : LP) of the note "B" level during playback as shown in Fig. 3-4-10.

(10) Set normal VCR mode by perssing "K" button again so adjustment data is memorized.

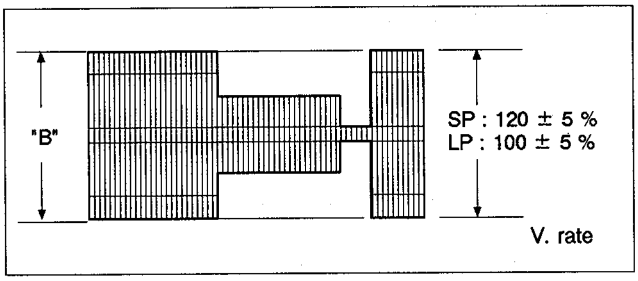


Fig. 3-4-10 REC colour level

3.4.8 SUB EMPHASIS INPUT LEVEL

Signal	•Colour bar
Mode	•EE •S-VHS
Equipment	•Oscilloscope
Measurement point	•TP226 (SUB EMPHASIS)
Adjustment tool	•Presetting unit [PTU94008] •Remote controller
EVR mode	•A : 15
Specification	•400 ± 20 mVp-p

(1) Connect an oscilloscope to TP226.

(2) Set EVR mode by pressing "K" button of the presetting unit more than 3 seconds.

(3) Set "A : 15" by pressing ① and ⑤ numeric keys of the remote controller.

(4) Adjust TV PROG "V" "Λ" button for 400 ± 20 mVp-p.

(5) Set normal VCR mode by pressing "K" button again so adjustment data is memorized.

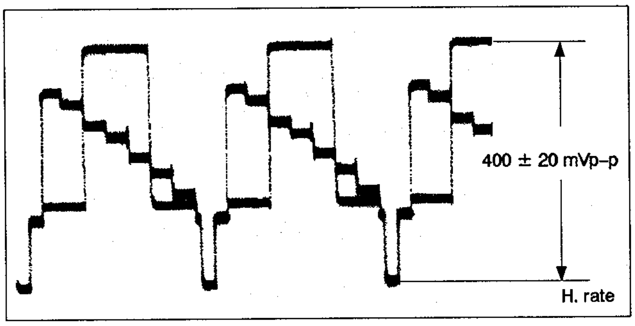


Fig. 3-4-11 Sub emphasis input level

3.4.9 S-VHS / VHS WHITE CLIP

Signal	•Colour bar
Mode	•EE •S-VHS / VHS
Equipment	•Oscilloscope
Measurement point	•TP252 (W/D CLIP)
Adjustment tool	•Presetting unit [PTU94008] •Remote controller
EVR mode	•A : 14
Specification	•White clip : 110 ± 4 % (S-VHS) •White clip : 90 ± 4 % (VHS)

(1) Connect an oscilloscope to TP252.

(2) Set EVR mode by pressing "K" button of the presetting unit more than 3 seconds.

(3) Set "A : 14" by pressing ① and ④ numeric keys of the remote controller.

(4) Adjust TV PROG "V" "Λ" button for 110 ± 4 % (90 ± 4 %) white clip as shown in Fig. 3-4-12.

(5) Set normal VCR mode by pressing "K" button again so adjustment data is memorized.

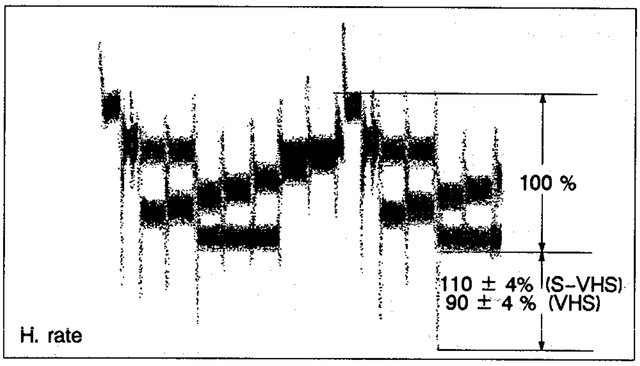


Fig. 3-4-12 S-VHS / VHS white clip

3.4.10 S-VHS / VHS CARRIER & DEVIATION

• CARRIER

Signal	•No signal - VIDEO INPUT
Mode	•EE •S-VHS / VHS
Equipment	•Frequency counter
Measurement point	•TP204 (CARR / DEV)
Adjustment tool	•Presetting unit [PTU94008] •Remote controller
EVR mode	•A : 12
Specification	•5.40 ± 0.03 MHz (S-VHS) •3.80 ± 0.03 MHz (VHS)

(1) Connect an frequency counter to TP204.

(2) Set EVR mode by pressing "K" button of the presetting unit more than 3 seconds.

(3) Set "A : 12" by pressing ① and ② numeric keys of the remote controller.

(4) Adjust TV PROG "V" "Λ" button for 5.40 ± 0.03 MHz (3.80 ± 0.03 MHz).

(5) Set normal VCR mode by pressing "K" button again so adjustment data is memorized.

• DEVIATION

Signal	•Colour bar
Mode	•REC → PB •S-VHS / VHS
Equipment	•Oscilloscope
Measurement point	•TP20 (Y OUT) [TERMINAL board]
Adjustment tool	•Presetting unit [PTU94008] •Remote controller
EVR mode	•A : 13
Specification	•2.00 ± 0.06 Vp-p (Unterminated)

(1) Connect an oscilloscope to TP20 of the TERMINAL board.

(2) Set EVR mode by pressing "K" button of the presetting unit more than 3 seconds.

(3) Set "A : 13" by pressing ① and ③ numeric keys of the remote controller.

(4) Record and playback a colour bar signal.

(5) Before recording, adjust TV PROG "V" "Λ" button of the remote controller so that Y level becomes 2.00 ± 0.06 Vp-p during playback as shown in Fig. 3-4-13.

(6) Set normal VCR mode by pressing "K" button again so adjustment data is memorized.

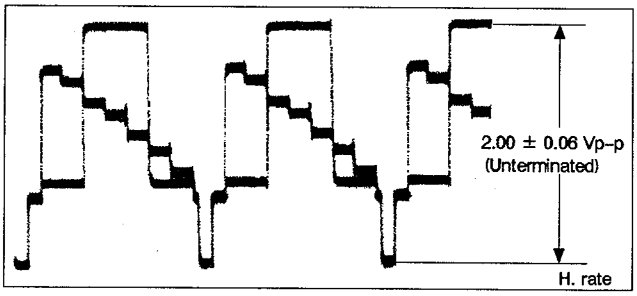


Fig. 3-4-13 Carrier & deviation

3.4.11 PILOT BURST LEVEL

Signal	•Colour bar
Mode	•EE •S-VHS
Equipment	•Oscilloscope
Measurement point	•CN203 pin 4
Adjustment tool	•Presetting unit [PTU94008] •Remote controller
EVR mode	•A : 16
Specification	•Equal level

(1) Connect an oscilloscope to pin 4 of CN203.

(2) Set EVR mode by pressing "K" button of the presetting unit more than 3 seconds.

(3) Set "A : 16" by pressing ① and ⑥ numeric keys of the remote controller.

(4) Adjust TV PROG "V" "Λ" button for equal pilot burst level.

(5) Set normal VCR mode by pressing "K" button again so adjustment data is memorized.

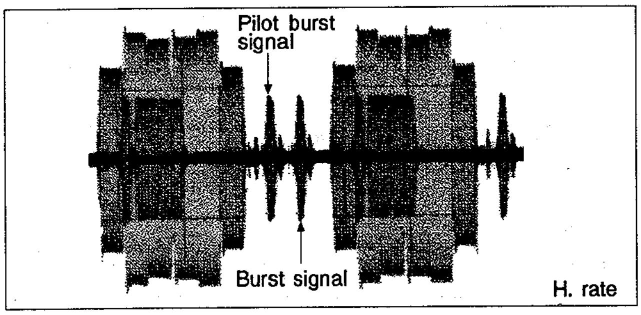


Fig. 3-4-14 Pilot burst level

3.5 AUDIO CIRCUIT

Note: *Unless otherwise specified, all measurement point and adjustment parts are located on the AUDIO UNIT BOARD.*

Important:

Item 3.5.2 and 3.5.3.

1) Ordinarily performing these adjustments is not required. Adjustments should be performed only if IC1 on the AUDIO UNIT BOARD has been replaced.
2) To adjust, replace fixed resistor with variable chip resistor, then adjust as required.

3.5.1 AUDIO REC FM LEVEL

Signal	•AUX •VIDEO: Colour bar •AUDIO: No signal
Mode	•REC → PB : LP •S-VHS
Equipment	•Oscilloscope
Measurement point	•TP253 (AUDIO PB FM) [PRE/REC board]
Trriger slope (−)	•TP411 (DRUM FF) [MAIN board]
Adjustment part	•R216 (A. REC FM) [PRE/REC board]
Specification	•60 ± 10 mVp-p.

(1) Connect an oscilloscope to TP253.

(2) Record a colour bar signal without an audio signal in S-VHS LP mode then playback.

(3) Adjust R216 for 60 mVp-p playback level of higher channel level before recording.

(4) Confirm that the lower channel level is more than 40 mVp-p.

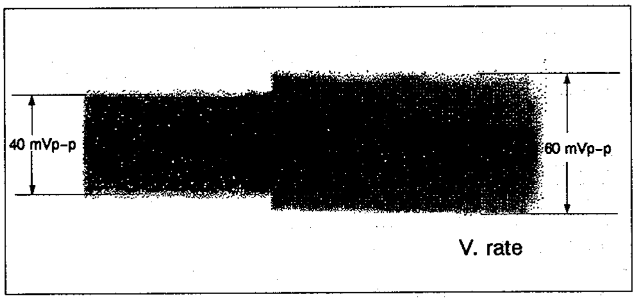


Fig. 3-5-1 Audio REC FM level

3.5.2 CARRIER FREQUENCY

Signal	•No signal
Mode	•EE
Equipment	•Frequency counter
Measurement point	•IC1 pin 21 (L ch) •IC1 pin 43 (R ch)
Adjustment part	•R11 (L CARRIER) •R25 (R CARRIER)
Specification	•1.400 ± 0.005 MHz: R11 •1.800 ± 0.005 MHz: R25

(1) Connect the frequency counter to IC1 pin 21.
(2) Confirm that the frequency is 1.400 ± 0.005 MHz.
(3) If necessary, replace R11 with the variable chip resistor NVP1301-153NZ and adjust it for 1.400 ± 0.005 MHz.
(4) Connect the frequency counter to IC1 pin 43.
(5) Confirm that the frequency is 1.800 ± 0.005 MHz.
(6) If necessary, replace R25 with the variable chip resistor NVP1301-153NZ and adjust it for 1.800 ± 0.005 MHz.

3.5.3 HI-FI PLAYBACK AUDIO LEVEL

Signal	•Audio 1 kHz (-8 dBs)
Mode	•REC → PB
Equipment	•Audio oscillator •AC millivoltmeter
Measurement point	•Audio out (L ch) •Audio out (R ch)
Adjustment part	•R5 (L DEVIATION) •R30 (R DEVIATION)
Specification	•-8 dBs ± 1 dBs (0.9 Vp-p, 0.32 Vrms)

(1) Connect an audio oscillator to audio input (left channel).
(2) Record an audio 1 kHz signal and play it back.
(3) Confirm that output level is -8 dBs (0.9 Vp-p, 0.32 Vrms).
(4) If necessary, replace R5 with the variable chip resistor NVP1301-473NU and adjust it for -8 dBs (0.9 Vp-p, 0.32 Vrms).
(5) Connect an audio oscillator to audio input (right channel).
(6) Record an audio 1 kHz and play it back.
(7) Confirm that output level is -8 dBs (0.9 Vp-p, 0.32 Vrms).
(8) If necessary, replace R30 with the variable chip resistor NVP1301-473NU and adjust it for -8 dBs (0.9 Vp-p, 0.32 Vrms).

3.6 TIMER CIRCUIT

Note: *Unless otherwise specified, all measurement points and adjustment parts are located on the MAIN BOARD.*

3.6.1 TIMER CLOCK

Signal	•AUX •No signal
Mode	•EE
Equipment	•Frequency counter
Measurement point	•IC601 pin 64
Adjustment part	•C624 (TIMER CLOCK)
Specification	•1024.005 ± 0.001 Hz (976.5577 ± 0.0010 μsec)

(1) Connect the frequency counter to IC601 pin 64 and GND.
(2) Connect the short wire between IC601 pin 34 and IC601 pin 63.
(3) Short the leads of capacitor C605 once in order to reset IC601.
(4) Disconnect the short wire then connect it quickly again.
(5) Adjust C624 for 1024.005 ± 0.001 Hz (976.5577 ± 0.0010 μsec).
(6) Disconnect a short wire.

3.7 DEMODULATOR CIRCUIT

Note: *Unless otherwise specified, all measurement points and adjustment parts are located on the TUNER/DEMOD BOARD.*

3.7.1 STEREO SEPARATION

Signal	•Sweep generator output (96 dBμ, 1 kHz)
Mode	•EE
Equipment	•Oscilloscope
Measurement point	•CN4 pin 1
Adjustment part	•R264 (SEPARATION)
Specification	•Minimize

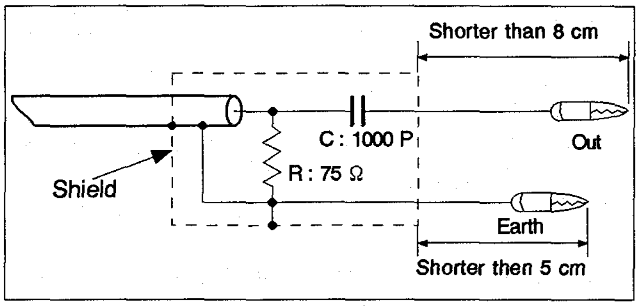


Fig. 3-7-1 Sweeper probe

(1) Use a sweeper probe as shown in Fig. 3-7-1.

(2) Supply 300 Hz R-only modulated IF signal to IF terminal of U/V tuner (front end).

(3) Connect an oscilloscope to pin 1 of CN4.

(4) Adjust R264 for minimum output level.

3.8 PAL PLUS CIRCUIT

Note: *Unless otherwise specified, all measurement points and adjustment parts are located on the PAL PULS BOARD.*

3.8.1 4Fsc

Signal	•No signal
Mode	•EE
Equipment	•Frequency counter
Measurement point	•IC1 pin 21
Adjustment part	•C28 (OSC)
Specification	•4.433618 ± 0.0001 MHz

(1) Connect the frequency counter to IC1 pin 21 and GND.

(2) Adjust C28 for 4.433618 ± 0.0001 MHz.

SECTION 4
CHARTS AND DIAGRAMS

SCHEMATIC DIAGRAM NOTES

Safety precautions
The Components identified by the symbol ⚠ are critical for safety. For continued safety, replace safety critical components only with manufactures recommended parts.

1. Schematic diagram values

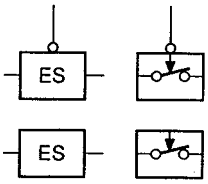
Unless otherwise specified.

1) All resistance values are in ohms. 1/6 W, 1/8 W (refer to parts list).
   Chip resistors are 1/16 W.
   K: KΩ (1000Ω), M: MΩ (1000KΩ)
2) All capacitance values are in μF, (P: PF).
3) All inductance values in μH, (m: mH).
4) All diodes are 1SS133 or MA165, (refer to parts list).

2. Indications

AUX : Active only at high.

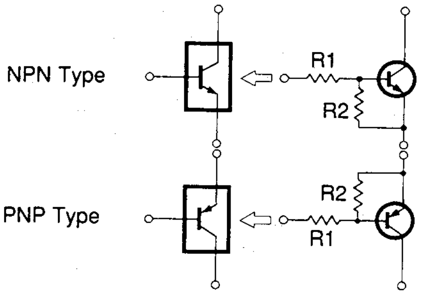
$\overline{\text{AUX}}$: Active only at low.



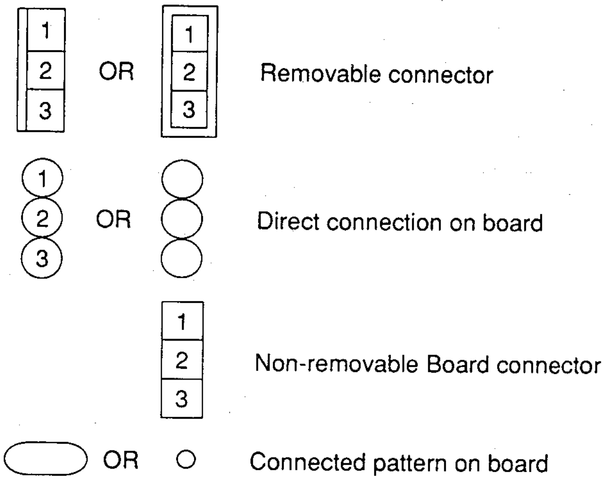
Active only at low for electronic switch.

Active only at high for electronic switch.

Digital transistor :
The digital transistor includes built in resistors.
It features small size and high reliability.

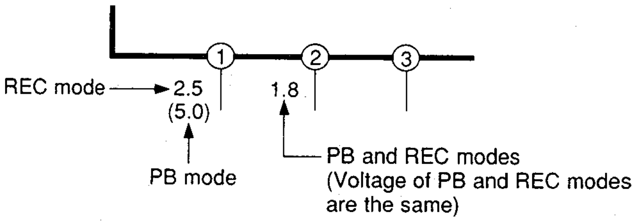

NPN Type
R1
R2
PNP Type
R2
R1

3. Interpreting Connector indications


1
2
3
OR
1
2
3
Removable connector
1
2
3
OR
Direct connection on board
1
2
3
Non-removable Board connector
OR
Connected pattern on board

4. Voltage measurement

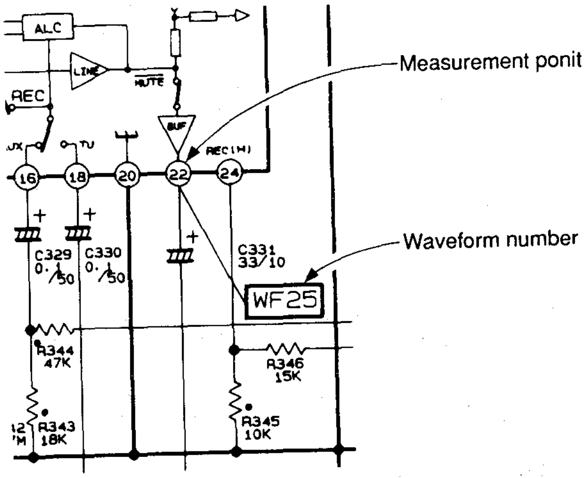
1) Video circuits
   REC: Colour bar signal in SP mode, normal VHS mode.
   PB : Alignment tape, colour bar SP mode, normal VHS mode.
   — : Unmeasurable or unnecessary to measure.
2) Audio circuits
   REC: 1KHz, –8 dBs sine wave signal in SP mode, Normal VHS mode.
   PB : REC then playback it.
3) Movie Camera circuits
   Measured using a correctly illuminated grey scale or colour bar test charts in the E-E mode.
4) Indication on schematic diagram
   Voltage Indications for REC and PB modes on the schematic diagram are as shown below.


①
②
③
REC mode
2.5
(5.0)
PB mode
1.8
PB and REC modes
(Voltage of PB and REC modes are the same)

Note: If do not indicate for voltage measurement on the schematic diagram, refer to the voltage charts.

5. Waveform measurement

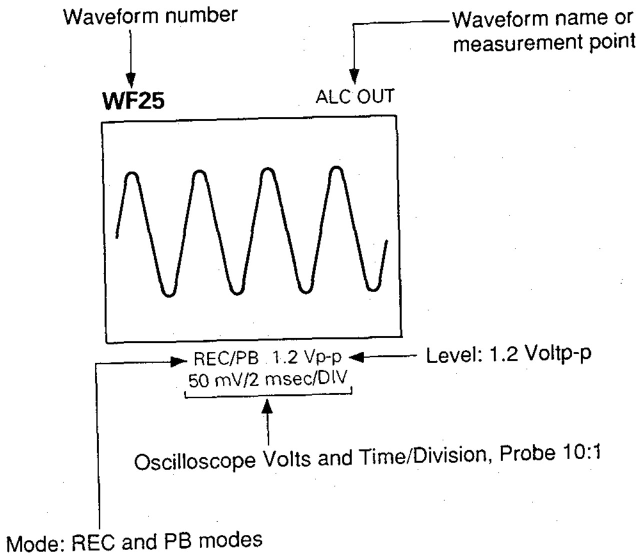
1) Video circuits
   REC: Colour bar signal in SP mode, normal VHS mode.
   PB : Alignment tape, colour bar SP mode, normal VHS mode.
2) Audio circuits
   REC: 1KHz, –8 dBs sine wave signal in SP mode, normal VHS mode.
   PB : REC then playback it.
3) Movie Camera circuits
   Measured using a correctly illuminated grey scale or colour bar test charts in the E-E mode.
4) Indication on schematic diagram
   Waveform indications on the schematic diagram are as shown below.



Measurement ponit

Waveform number

5) Waveform indications



Waveform number

Waveform name or measurement point

WF25

ALC OUT

REC/PB 1.2 Vp-p

50 mV/2 msec/DIV

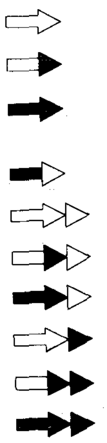
Level: 1.2 Voltp-p

Oscilloscope Volts and Time/Division, Probe 10:1

Mode: REC and PB modes

6. Signal path Symbols

The arrows indicate the signal path as follows.



- Playback signal path
- Playback and recording signal path
- Recording signal path (including E-E signal path)
- Y signal path
- Colour (Chroma) signal path
- R or R-Y signal path
- B or B-Y signal path
- Capstan servo path
- Drum servo path
- Reel servo path

CIRCUIT BOARD NOTES

1. Colour indications

1) Foil side :
   Foil side patterns are indicated at GREY shading.
2) Component side :
   Component side patterns are indicated at RED shading.

2. Foil and Component sides

1) Foil side (B side) :
   Parts on the foil side seen from foil face (pattern face) are indicated.
2) Component side (A side) :
   Parts on the component side seen from component face (parts face) are indicated.

3. Parts location guides

Parts location are indicated by guide scale on the circuit board.

1) Signal pattern :

REF No.	LOCATION
TRANSISTOR	
Q101	2A

Category: Transistor
Reference number
Horizontal "A" zone
Vertical "2" zone

2) Double pattern :

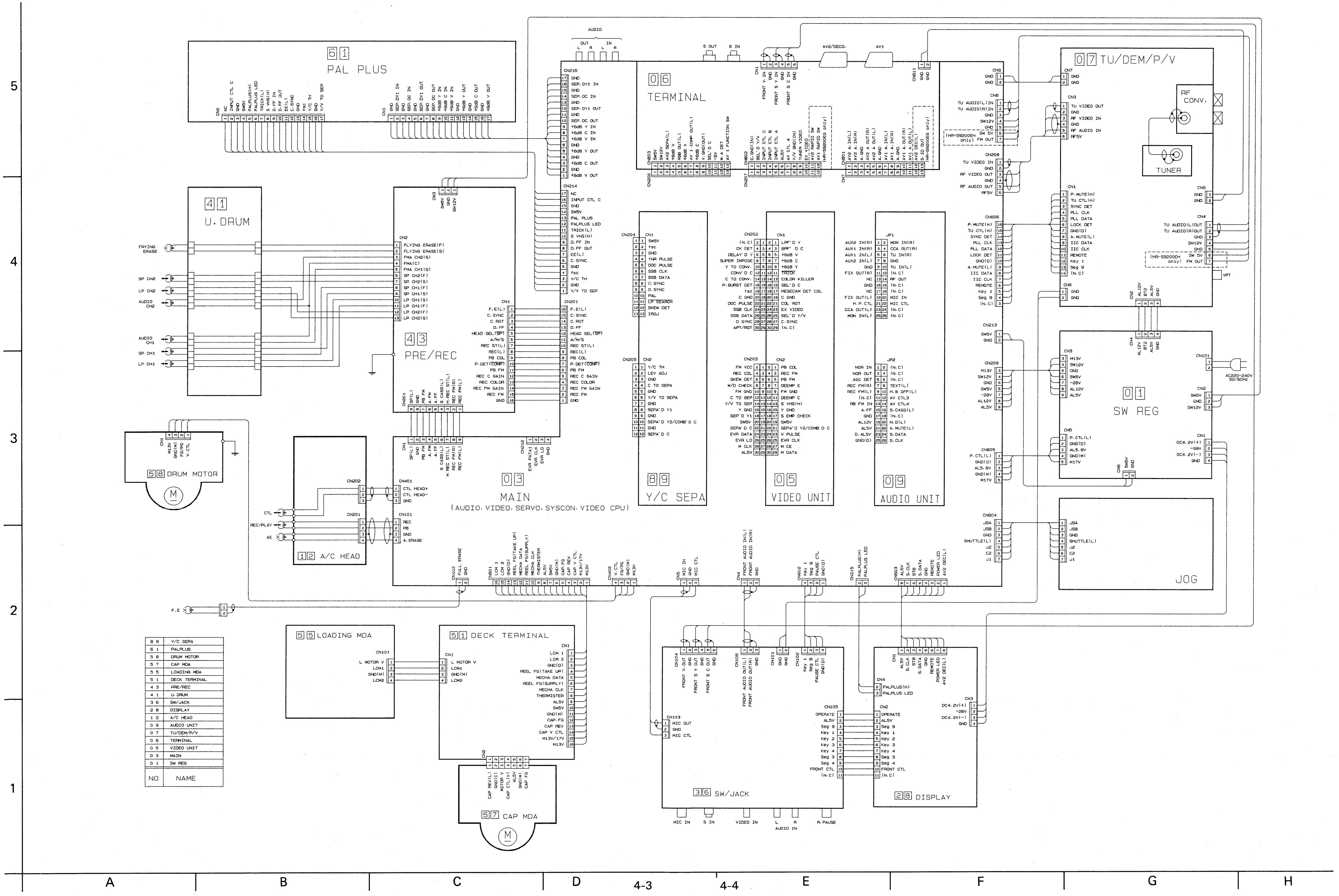
REF No.	LOCATION
IC	
IC101	B-5C

Category: IC
B: Foil side
(A: Component side)
Horizontal "C" zone
Vertical "5" zone

Notes:

1) **For general information in service manual, please refer to the Service Manual of GENERAL INFORMATION Edition 4 No. 82054D (January 1994).**
2) **For repairing SMC (Surface Mounted Components), please refer to the VIDEO SERVICE GUIDE No. VTS81001.**

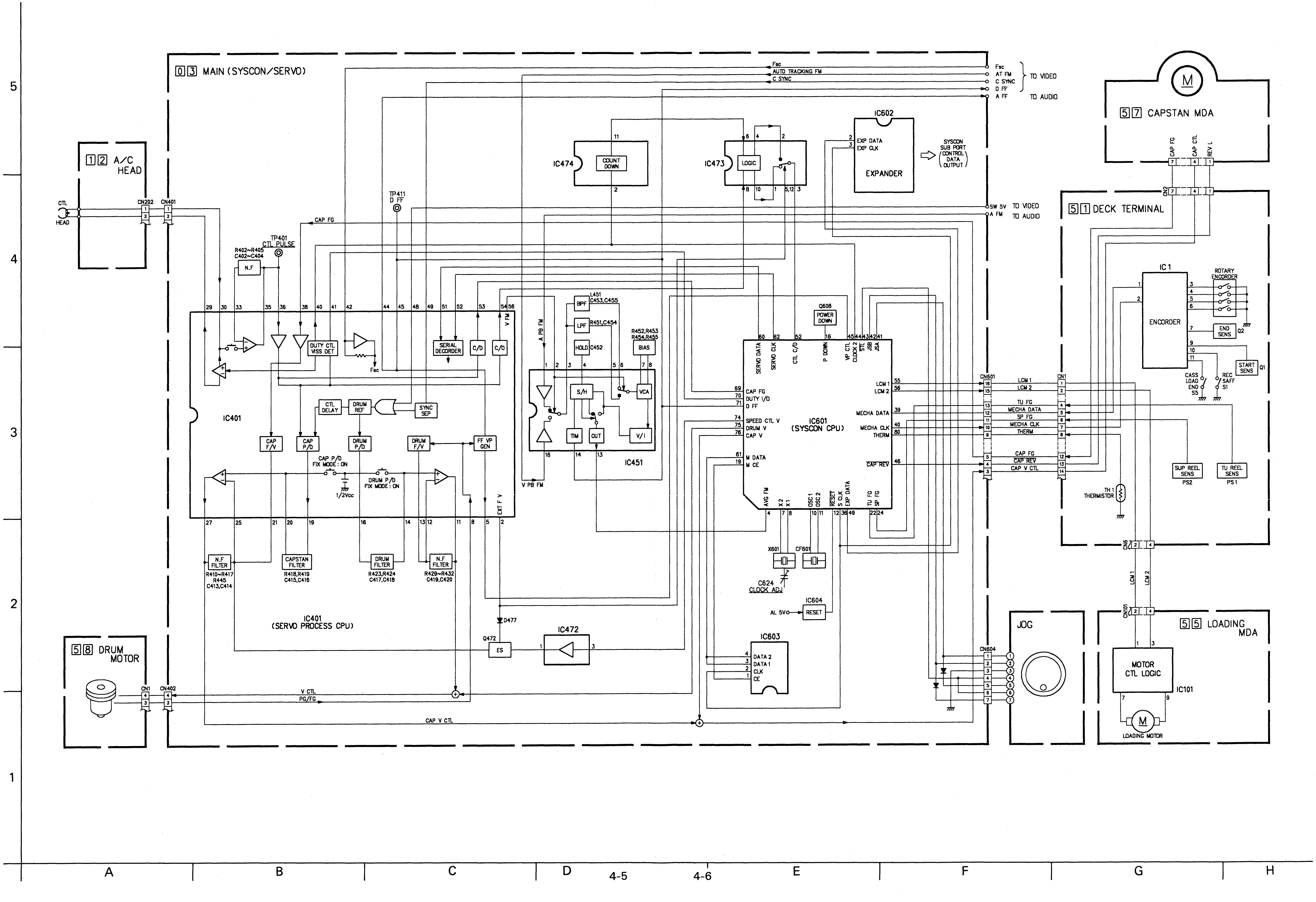
4.1 BOARD INTERCONNECTIONS



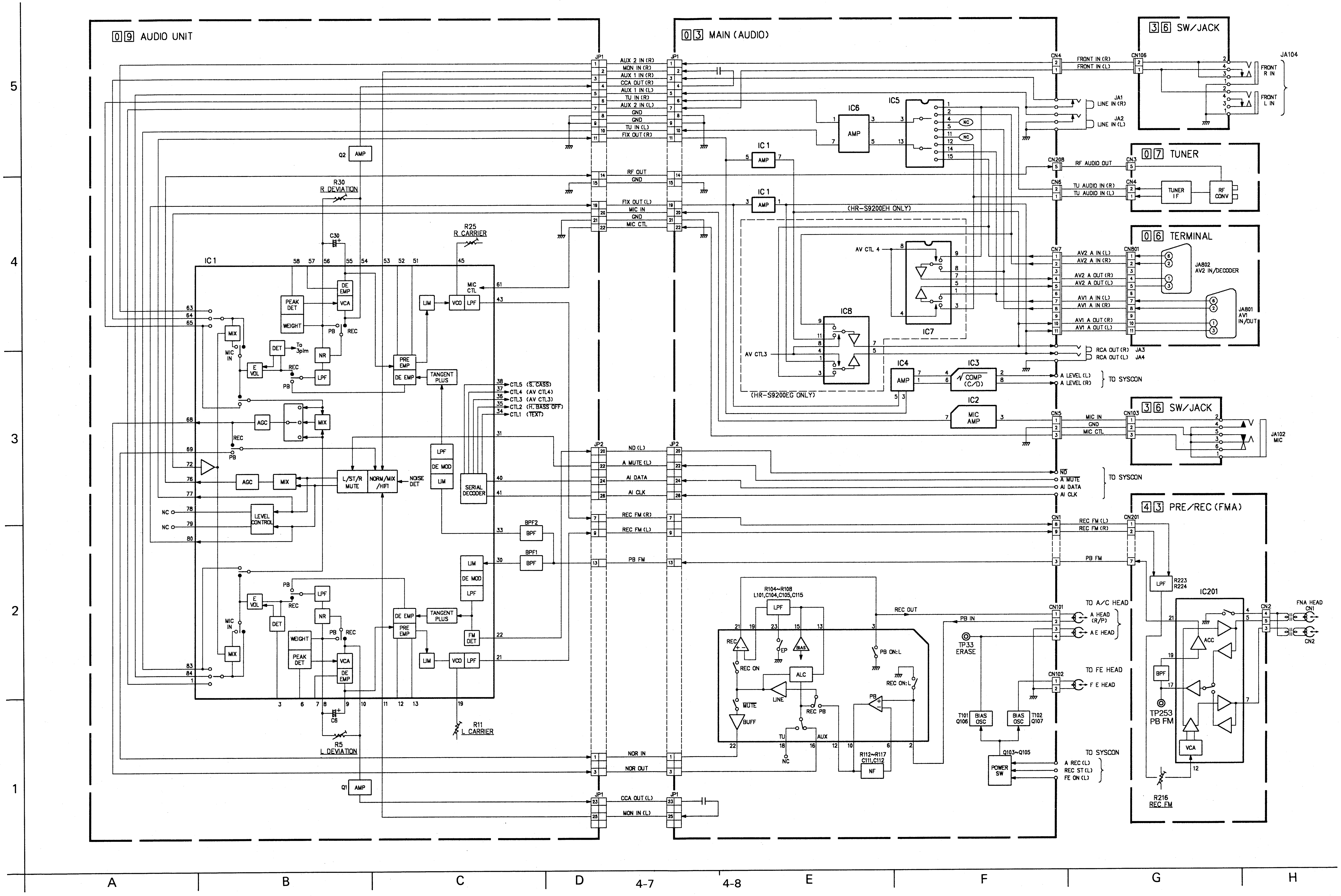
61 PAL PLUS
41 U.DRUM
43 PRE/REC
58 DRUM MOTOR
12 A/C HEAD
03 MAIN
(AUDIO, VIDEO, SERVO, SYSCON, VIDEO CPU)
06 TERMINAL
89 Y/C SEPA
05 VIDEO UNIT
09 AUDIO UNIT
07 TU/DEM/P/V
RF CONV.
TUNER
01 SW REG
JOG
55 LOADING MDA
51 DECK TERMINAL
57 CAP MDA
36 SW/JACK
28 DISPLAY
AUDIO
OUT
IN
S OUT
S IN
AV2/DECO.
AV1
AC220-240V 50/60Hz
MIC IN
S IN
VIDEO IN
L
R
AUDIO IN
R.PAUSE
F.E
A
B
C
D
E
F
G
H
1
2
3
4
5

8 9	Y/C SEPA
6 1	PALPLUS
5 8	DRUM MOTOR
5 7	CAP MDA
5 5	LOADING MDA
5 1	DECK TERMINAL
4 3	PRE/REC
4 1	U.DRUM
3 6	SW/JACK
2 8	DISPLAY
1 2	A/C HEAD
0 9	AUDIO UNIT
0 7	TU/DEM/P/V
0 6	TERMINAL
0 5	VIDEO UNIT
0 3	MAIN
0 1	SW REG
NO	NAME

4.2 SYSCON/SERVO BLOCK DIAGRAM

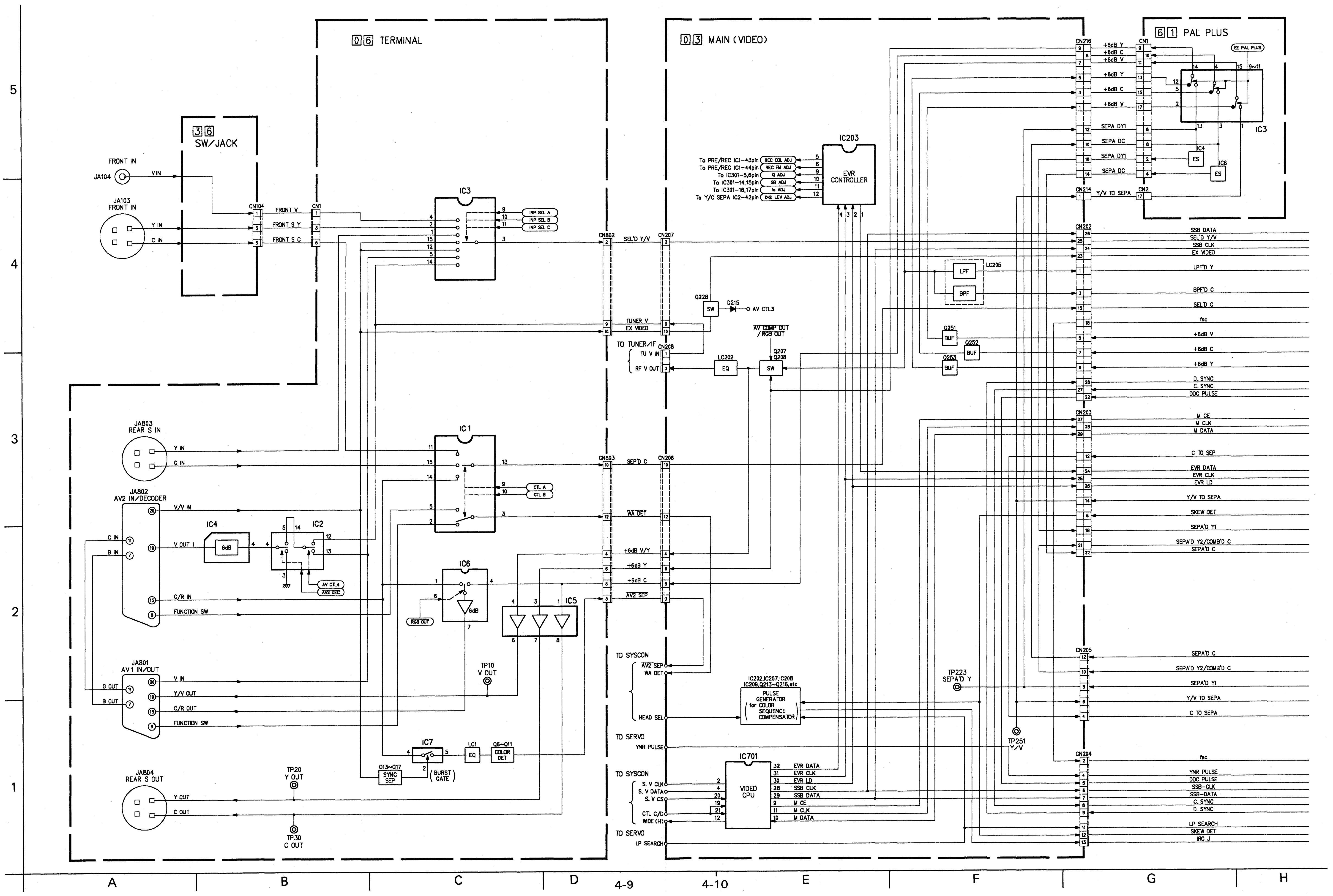

0 3 MAIN (SYSCON/SERVO)
1 2 A/C HEAD
CTL HEAD
CN202
CN401
5 8 DRUM MOTOR
CN1
CN402
5 7 CAPSTAN MDA
CAP FG
CAP CTL
REV L
CN2
5 1 DECK TERMINAL
IC1
ENCORDER
ROTARY ENCORDER
END SENS Q2
START SENS Q1
CASS LOAD END S5
REC SAFF S1
SUP REEL SENS PS2
TU REEL SENS PS1
TH1 THERMISTOR
CN6
LCM 1
LCM 2
CN101
5 5 LOADING MDA
MOTOR CTL LOGIC
IC101
LOADING MOTOR
JOG
CN604
Fsc
AT FM
C SYNC
D FF
A FF
TO VIDEO
TO AUDIO
SW 5V
A FM
AUTO TRACKING FM
IC474
COUNT DOWN
IC473
LOGIC
IC602
EXP DATA
EXP CLK
EXPANDER
SYSCON SUB PORT (CONTROL DATA OUTPUT)
TP411 D FF
TP401 CTL PULSE
CAP FG
R402~R405 C402~C404
N.F
DUTY CTL VISS DET
SERIAL DECORDER
C/D
V FM
SYNC SEP
CTL DELAY
DRUM REF
CAP F/V
CAP P/D
DRUM P/D
DRUM F/V
FF VP GEN
CAP P/D FIX MODE : ON
DRUM P/D FIX MODE : ON
1/2Vcc
IC401
EXT F V
N.F FILTER R410~R417 R445 C413,C414
CAPSTAN FILTER R418,R419 C415,C416
DRUM FILTER R423,R424 C417,C418
N.F FILTER R429~R432 C419,C420
IC401 (SERVO PROCESS CPU)
D477
Q472
ES
IC472
V CTL
PG/FG
CAP V CTL
A PB FM
V PB FM
BPF
L451 C453,C455
LPF
R451,C454
HOLD
C452
BIAS
R452,R453 R454,R455
S/H
VCA
TIM
OUT
V/I
IC451
Q608
POWER DOWN
IC601 (SYSCON CPU)
SERVO DATA
SERVO CLK
CTL C/D
P DOWN
VP CTL
CLOCK 2
STL
JSB
JSA
CAP FG
DUTY I/O
D FF
SPEED CTL V
DRUM V
CAP V
M DATA
M CE
LCM 1
LCM 2
MECHA DATA
MECHA CLK
THERM
CAP REV
AVG FM
X2
X1
OSC1
OSC2
RESET
S CLK
EXP DATA
TU FG
SP FG
CN601
TU FG
MECHA DATA
SP FG
MECHA CLK
THERM
CAP FG
CAP REV
CAP V CTL
X601
CF601
C624 CLOCK ADJ
IC604
AL 5V
RESET
IC603
DATA 2
DATA 1
CLK
CE
A
B
C
D
E
F
G
H
1
2
3
4
5

4.3 AUDIO BLOCK DIAGRAM

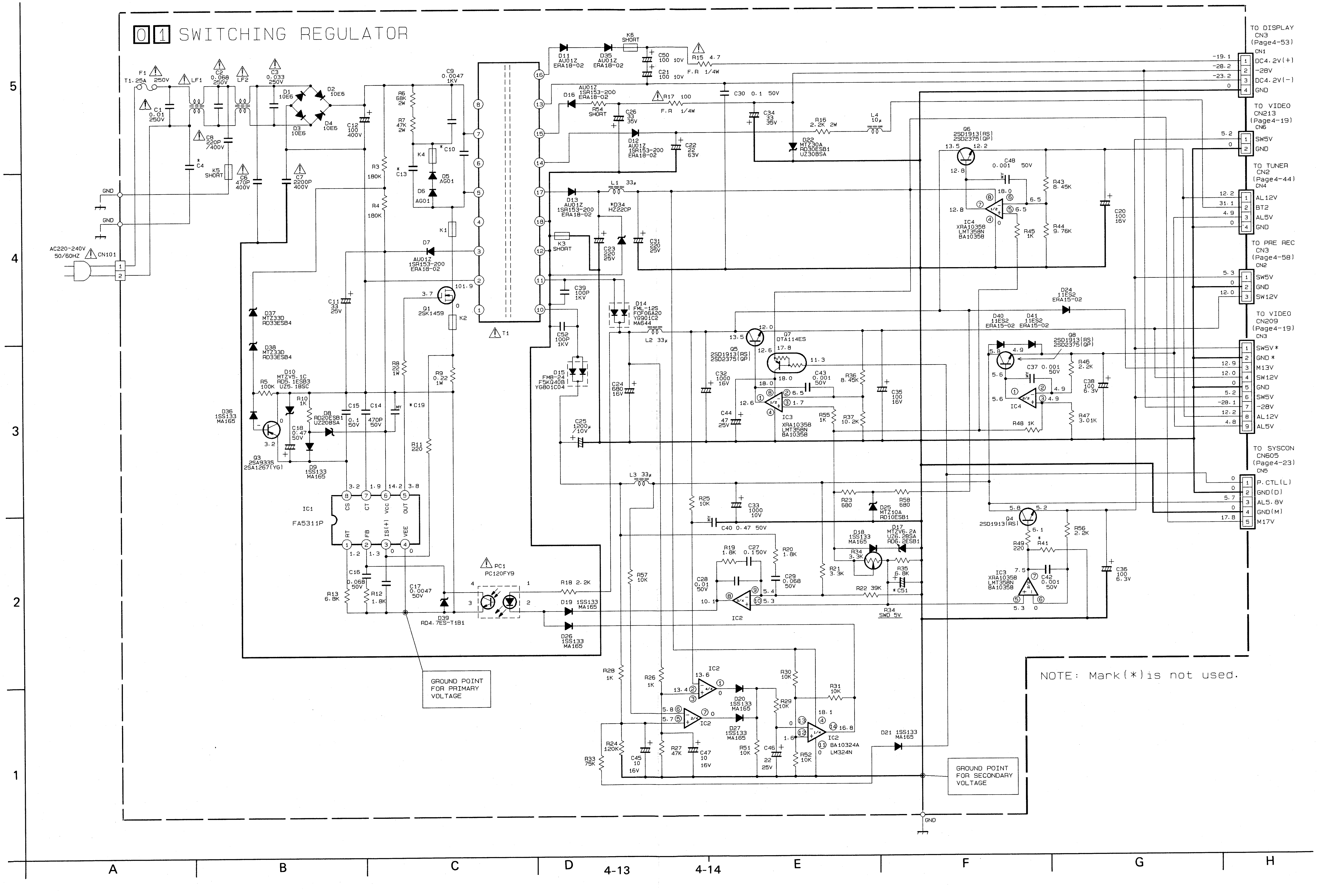


09 AUDIO UNIT
03 MAIN (AUDIO)
36 SW/JACK
07 TUNER
06 TERMINAL
43 PRE/REC (FMA)
IC1
IC5
IC6
IC7
IC8
IC4
IC3
IC2
IC201
JP1
JP2
CN4
CN106
JA104
FRONT R IN
FRONT L IN
JA1 LINE IN (R)
JA2 LINE IN (L)
CN208
CN3
RF AUDIO OUT
CN6
TU AUDIO IN (R)
TU AUDIO IN (L)
TUNER IF
RF CONV
CN7
CN801
AV2 A IN (L)
AV2 A IN (R)
AV2 A OUT (R)
AV2 A OUT (L)
JA802 AV2 IN/DECODER
AV1 A IN (L)
AV1 A IN (R)
AV1 A OUT (R)
AV1 A OUT (L)
JA801 AV1 IN/OUT
RCA OUT (R) JA3
RCA OUT (L) JA4
A LEVEL (L)
A LEVEL (R)
TO SYSCON
COMP (C/D)
MIC AMP
CN5
CN103
MIC IN
GND
MIC CTL
JA102 MIC
ND
A MUTE
AI DATA
AI CLK
CN1
CN201
REC FM (L)
REC FM (R)
PB FM
AUX 2 IN (R)
MON IN (R)
AUX 1 IN (R)
CCA OUT (R)
AUX 1 IN (L)
TU IN (R)
AUX 2 IN (L)
TU IN (L)
FIX OUT (R)
RF OUT
FIX OUT (L)
MIC IN
MIC CTL
(HR-S9200EH ONLY)
(HR-S9200EG ONLY)
AV CTL 4
AV CTL3
AMP
Q2
Q1
R30 R DEVIATION
C30
R25 R CARRIER
PEAK DET
WEIGHT
DE EMP
VCA
NR
LPF
DET
To 3p1m
E VOL
MIX
MIC IN
REC
PB
PRE EMP
TANGENT PLUS
LIM
VCO
MIC CTL
AGC
L/ST/R MUTE
NORM/MIX /HIFI
NOISE DET
DE MOD
SERIAL DECODER
LEVEL CONTROL
NC
CTL5 (S. CASS)
CTL4 (AV CTL4)
CTL3 (AV CTL3)
CTL2 (H. BASS OFF)
CTL1 (TEXT)
BPF2
BPF1
BPF
FM DET
C6
R5 L DEVIATION
R11 L CARRIER
NOR IN
NOR OUT
CCA OUT (L)
MON IN (L)
R104~R108 L101,C104,C105,C115
REC OUT
PB IN
REC ON
EP
BIAS
ALC
LINE
MUTE
BUFF
REC PB
TU
AUX
PB ON:L
REC ON:L
R112~R117 C111,C112
NF
TP33 ERASE
CN101
TO A/C HEAD
A HEAD (R/P)
A E HEAD
CN102
TO FE HEAD
F E HEAD
T101 Q106 BIAS OSC
T102 Q107 BIAS OSC
Q103~Q105
POWER SW
A REC (L)
REC ST (L)
FE ON (L)
R223 R224
CN2
FNA HEAD
ACC
TP253 PB FM
R216 REC FM
A
B
C
D
E
F
G
H
1
2
3
4
5

4.4 VIDEO BLOCK DIAGRAM

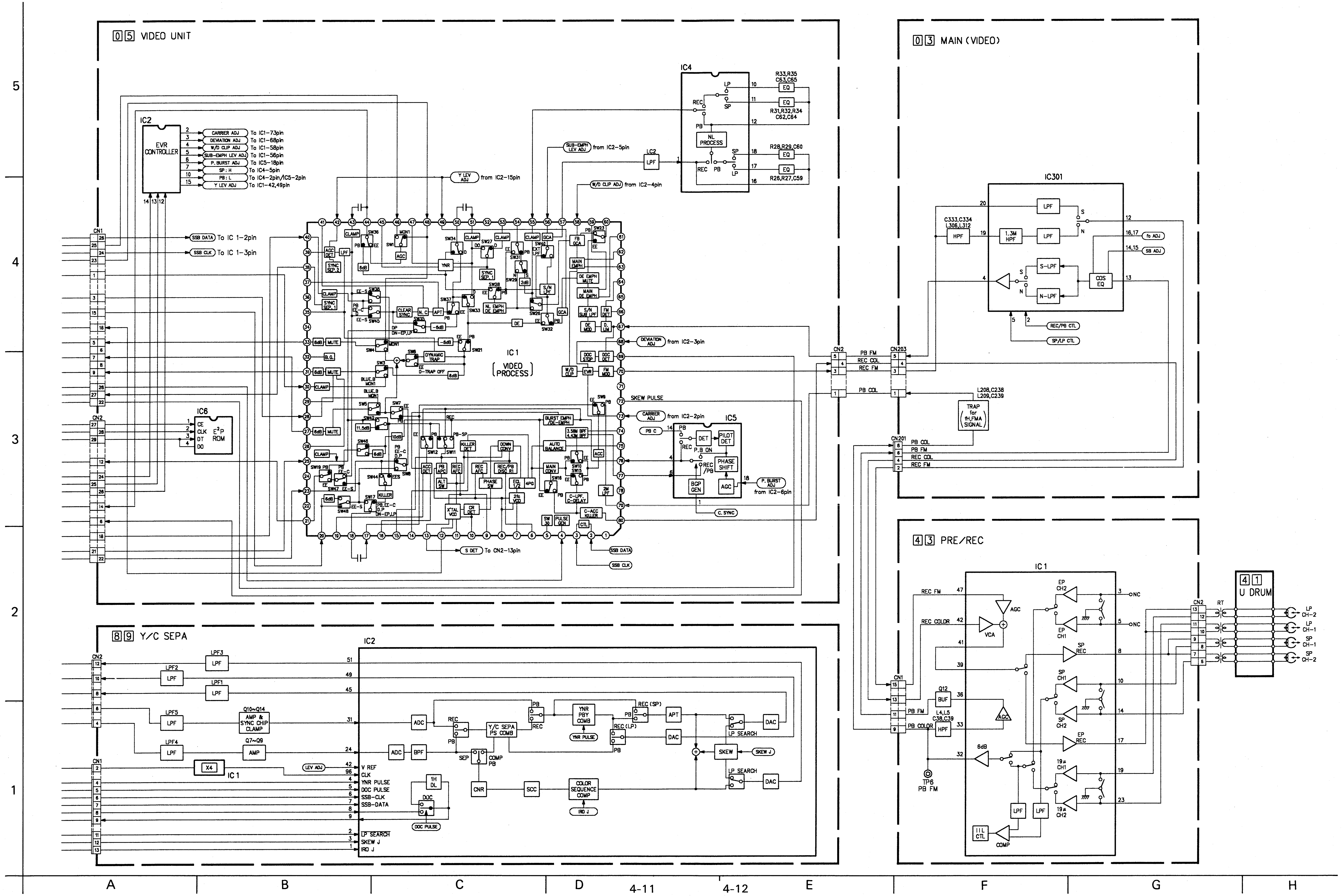

06 TERMINAL
36 SW/JACK
FRONT IN
JA104
V IN
JA103
FRONT IN
Y IN
C IN
CN104
FRONT V
FRONT S Y
FRONT S C
CN1
IC3
INP SEL A
INP SEL B
INP SEL C
CN802
SEL'D Y/V
TUNER V
EX VIDEO
JA803
REAR S IN
Y IN
C IN
JA802
AV2 IN/DECODER
V/V IN
G IN
B IN
V OUT 1
C/R IN
FUNCTION SW
IC4
6dB
IC2
AV CTL4
AV2 DEC
IC1
CTL A
CTL B
CN803
SEP'D C
WA DET
+6dB V/Y
+6dB Y
+6dB C
AV2 SEP
IC6
RGB OUT
6dB
IC5
JA801
AV1 IN/OUT
V IN
G OUT
B OUT
Y/V OUT
C/R OUT
FUNCTION SW
TP10
V OUT
IC7
LC1
EQ
Q6~Q11
COLOR DET
Q13~Q17
SYNC SEP
BURST GATE
JA804
REAR S OUT
Y OUT
C OUT
TP20
Y OUT
TP30
C OUT
03 MAIN (VIDEO)
IC203
EVR CONTROLLER
To PRE/REC IC1-43pin REC COL ADJ
To PRE/REC IC1-44pin REC FM ADJ
To IC301-5,6pin Q ADJ
To IC301-14,15pin SB ADJ
To IC301-16,17pin fo ADJ
To Y/C SEPA IC2-42pin DIGI LEV ADJ
CN207
Q228
SW
D215
AV CTL3
TO TUNER/IF
CN208
TU V IN
RF V OUT
LC202
EQ
AV COMP OUT / RGB OUT
Q207
Q208
SW
LC205
LPF
BPF
Q251
BUF
Q252
BUF
Q253
BUF
CN206
TO SYSCON
AV2 SEP
WA DET
HEAD SEL
IC202,IC207,IC208
IC209,Q213~Q216,etc
PULSE GENERATOR (for COLOR SEQUENCE COMPENSATOR)
TO SERVO
YNR PULSE
TP223
SEPA'D Y
TP251
Y/V
TO SYSCON
S. V CLK
S. V DATA
S. V CS
CTL C/D
WIDE (H)
TO SERVO
LP SEARCH
IC701
VIDEO CPU
EVR DATA
EVR CLK
EVR LD
SSB CLK
SSB DATA
M CE
M CLK
M DATA
CN216
+6dB Y
+6dB C
+6dB V
+6dB Y
+6dB C
+6dB V
SEPA DY1
SEPA DC
SEPA DY1
SEPA DC
CN214
Y/V TO SEPA
CN2
61 PAL PLUS
CN1
EE PAL PLUS
IC3
IC4
ES
IC6
ES
CN202
SSB DATA
SEL'D Y/V
SSB CLK
EX VIDEO
LPF'D Y
BPF'D C
SEL'D C
fsc
+6dB V
+6dB C
+6dB Y
D. SYNC
C. SYNC
DOC PULSE
CN203
M CE
M CLK
M DATA
C TO SEP
EVR DATA
EVR CLK
EVR LD
Y/V TO SEPA
SKEW DET
SEPA'D Y1
SEPA'D Y2/COMB'D C
SEPA'D C
CN205
SEPA'D C
SEPA'D Y2/COMB'D C
SEPA'D Y1
Y/V TO SEPA
C TO SEPA
CN204
fsc
YNR PULSE
DOC PULSE
SSB-CLK
SSB-DATA
C. SYNC
D. SYNC
LP SEARCH
SKEW DET
IRO J
5
4
3
2
1
A
B
C
D
E
F
G
H

4.5 SWITCHING REGULATOR SCHEMATIC DIAGRAM

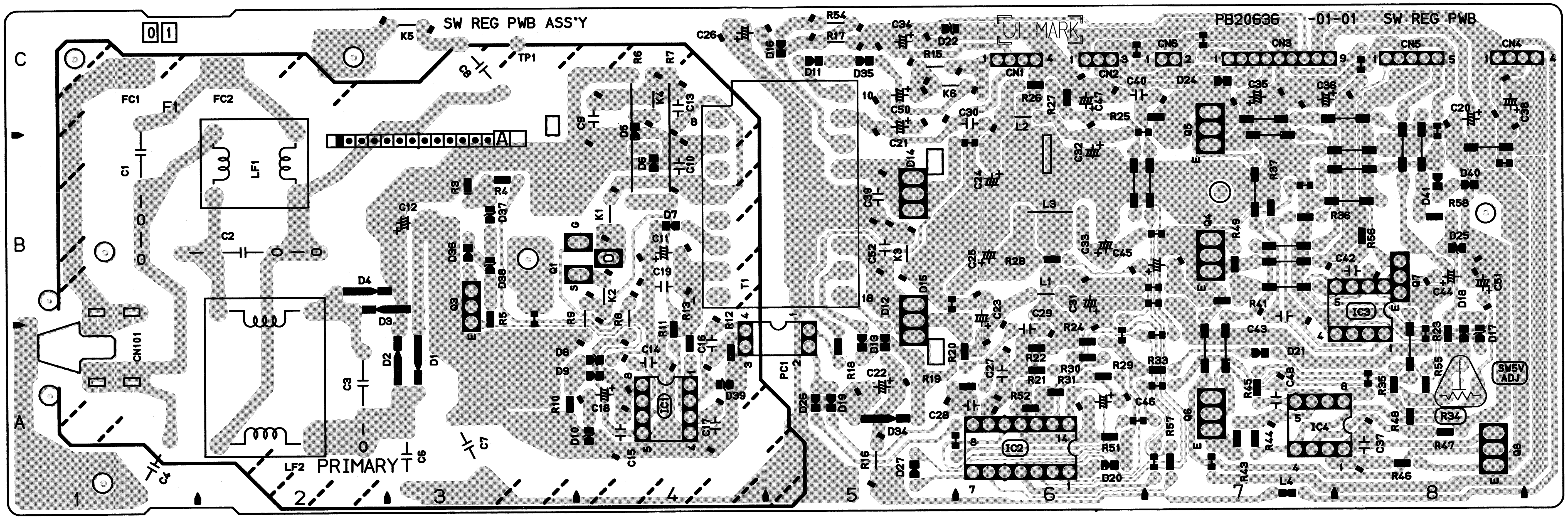


01 SWITCHING REGULATOR
T1.25A 250V
F1
LF1
LF2
C1 0.01 250V
C2 0.068 250V
C3 0.033 250V
C4
C6 470P 400V
C7 2200P 400V
C8 220P /400V
K5 SHORT
GND
AC220-240V 50/60HZ
CN101
D1 10E6
D2 10E6
D3 10E6
D4 10E6
C12 100 400V
R6 68K 2W
R7 47K 2W
C9 0.0047 1KV
C10
C13
K4
D5 AG01
D6 AG01
R3 180K
R4 180K
K1
D7 AU01Z 1SR153-200 ERA18-02
C11 33 25V
Q1 2SK1459
K2
T1
D37 MTZ33D RD33ESB4
D38 MTZ33D RD33ESB4
D10 MTZV5.1C RD5.1ESB3 UZ5.1BSC
R5 100K
R10 1K
D8 RD20ESB1 UZ20BSA
D36 1SS133 MA165
Q3 2SA933S 2SA1267(YG)
C18 0.47 50V
D9 1SS133 MA165
C15 0.1 50V
C14 470P 50V
C19
R8 22 1W
R9 0.22 1W
R11 220
IC1 FA5311P
CS CT VCC OUT RT FB IS(+) VEE
C16 0.068 50V
R13 6.8K
R12 1.8K
C17 0.0047 50V
D39 RD4.7ES-T1B1
PC1 PC120FY9
GROUND POINT FOR PRIMARY VOLTAGE
D11 AU01Z ERA18-02
D35 AU01Z ERA18-02
K6 SHORT
C50 100 10V
C21 100 10V
R15 4.7 F.R 1/4W
C30 0.1 50V
D16 AU01Z 1SR153-200 ERA18-02
R54 SHORT
C26 33 35V
R17 100 F.R 1/4W
C34 33 35V
R16 2.2K 2W
L4 10μ
D12 AU01Z 1SR153-200 ERA18-02
C22 22 63V
D22 MTZ30A RD30ESB1 UZ30BSA
D13 AU01Z 1SR153-200 ERA18-02
L1 33μ
D34 HZ22CP
K3 SHORT
C23 220 25V
C31 220 25V
C39 100P 1KV
C52 100P 1KV
D14 FML-12S FCF06A20 YG901C2 MA644
L2 33μ
D15 FMB-24 F5KQ40B YG801C04
C24 680 16V
C25 1200μ /10V
Q5 2SD1913(RS) 2SD2375(QP)
Q7 DTA114ES
C32 1000 16V
C43 0.001 50V
R36 8.45K
C35 100 16V
C44 47 25V
IC3 XRA10358 LMT358N BA10358
R55 1K
R37 10.2K
Q6 2SD1913(RS) 2SD2375(QP)
C48 0.001 50V
R43 8.45K
R44 9.76K
R45 1K
IC4 XRA10358 LMT358N BA10358
C20 100 16V
D24 11ES2 ERA15-02
D40 11ES2 ERA15-02
D41 11ES2 ERA15-02
Q8 2SD1913(RS) 2SD2375(QP)
R46 2.2K
C37 0.001 50V
C38 100 6.3V
R47 3.01K
R48 1K
L3 33μ
R25 10K
C33 1000 10V
C40 0.47 50V
R23 680
R58 680
D25 MTZ10A RD10ESB1
D17 MTZV6.2A UZ6.2BSA RD6.2ESB1
D18 1SS133 MA165
R34 3.3K
R35 6.8K
C51
R19 1.8K
C27 0.1 50V
R20 1.8K
C28 0.01 50V
C29 0.068 50V
R21 3.3K
R22 39K
R34 SWD 5V
IC2
R18 2.2K
D19 1SS133 MA165
D26 1SS133 MA165
R57 10K
Q4 2SD1913(RS)
R49 220
R41
R56 2.2K
IC3 XRA10358 LMT358N BA10358
C42 0.001 50V
C36 100 6.3V
R28 1K
R26 1K
D20 1SS133 MA165
D27 1SS133 MA165
R30 10K
R31 10K
R29 10K
R24 120K
R33 75K
C45 10 16V
R27 47K
C47 10 16V
R51 10K
C46 22 25V
R52 10K
IC2 BA10324A LM324N
D21 1SS133 MA165
GROUND POINT FOR SECONDARY VOLTAGE
GND
TO DISPLAY CN3 (Page4-53) CN1
DC4.2V(+)
-28V
DC4.2V(-)
GND
TO VIDEO CN213 (Page4-19) CN6
SW5V
GND
TO TUNER CN2 (Page4-44) CN4
AL12V
BT2
AL5V
GND
TO PRE REC CN3 (Page4-58) CN2
SW5V
GND
SW12V
TO VIDEO CN209 (Page4-19) CN3
SW5V*
GND*
M13V
SW12V
GND
SW5V
-28V
AL12V
AL5V
TO SYSCON CN605 (Page4-23) CN5
P.CTL(L)
GND(D)
AL5.8V
GND(M)
M17V
A
B
C
D
E
F
G
H
1
2
3
4
5

NOTE: Mark(*)is not used.


05 VIDEO UNIT
03 MAIN (VIDEO)
89 Y/C SEPA
43 PRE/REC
41 U DRUM
IC2
EVR CONTROLLER
CARRIER ADJ To IC1-73pin
DEVIATION ADJ To IC1-68pin
W/D CLIP ADJ To IC1-58pin
SUB-EMPH LEV ADJ To IC1-56pin
P. BURST ADJ To IC5-18pin
SP : H To IC4-5pin
PB : L To IC4-2pin/IC5-2pin
Y LEV ADJ To IC1-42,49pin
SSB DATA To IC 1-2pin
SSB CLK To IC 1-3pin
IC6
E²P ROM
CE
CLK
DT
DO
IC4
NL PROCESS
LC2
LPF
EQ
R33,R35 C63,C65
R31,R32,R34 C62,C64
R28,R29,C60
R26,R27,C59
SUB-EMPH LEV ADJ from IC2-5pin
Y LEV ADJ from IC2-15pin
W/D CLIP ADJ from IC2-4pin
IC 1
(VIDEO PROCESS)
DEVIATION ADJ from IC2-3pin
SKEW PULSE
CARRIER ADJ from IC2-2pin
IC5
PB C
DET
PILOT DET
PHASE SHIFT
BGP GEN
AGC
P. BURST ADJ from IC2-6pin
C. SYNC
S DET To CN2-13pin
SSB DATA
SSB CLK
CN1
CN2
CN203
CN201
PB FM
REC COL
REC FM
PB COL
IC301
LPF
HPF
1.3M HPF
S-LPF
N-LPF
COS EQ
C333,C334 L306,L312
fo ADJ
SB ADJ
REC/PB CTL
SP/LP CTL
L208,C238 L209,C239
TRAP for fH,FMA SIGNAL
IC2
LPF1
LPF2
LPF3
LPF4
LPF5
Q10~Q14 AMP & SYNC CHIP CLAMP
Q7~Q9 AMP
X4
IC 1
LEV ADJ
V REF
CLK
YNR PULSE
DOC PULSE
SSB-CLK
SSB-DATA
LP SEARCH
SKEW J
IRO J
ADC
BPF
Y/C SEPA PS COMB
YNR PBY COMB
YNR PULSE
APT
DAC
SKEW
CNR
SCC
COLOR SEQUENCE COMP
IRO J
1H DL
DOC
DOC PULSE
SEP
COMP
REC (SP)
REC (LP)
LP SEARCH
IC 1
REC FM
REC COLOR
VCA
AGC
EP CH2
EP CH1
SP REC
SP CH1
SP CH2
EP REC
19μ CH1
19μ CH2
Q12 BUF
L4,L5 C38,C39 HPF
6dB
TP6 PB FM
III CTL
COMP
NC
RT
LP CH-2
LP CH-1
SP CH-1
SP CH-2
1
2
3
4
5
A
B
C
D
E
F
G
H

4.6 SWITCHING REGULATOR CIRCUIT BOARD


SW REG PWB ASS'Y
PB20636 -01-01 SW REG PWB
UL MARK
01
PRIMARY
SW5V ADJ
FC1
F1
FC2
LF1
LF2
CN101
CN1
CN2
CN3
CN4
CN5
CN6
T1
PC1
IC1
IC2
IC3
IC4
Q1
Q3
Q4
Q5
Q6
Q7
Q8
K1
K2
K3
K4
K5
K6
L1
L2
L3
L4
TP1
R34
A
B
C
1
2
3
4
5
6
7
8

COMPONENT PARTS LOCATION GUIDE

REF.NO.	LOCATION		
CAPACITOR			
C1	A	D	1C
C2	A	D	1B
C3	A	D	2A
C4	A	D	1A
C6	A	D	3A
C7	A	D	3A
C8	A	D	3C
C9	A	D	4C
C10	A	D	4B
C11	A	D	4B
C12	A	D	2B
C13	A	D	4C
C14	A	D	4A
C15	A	D	4A
C16	A	D	4A
C17	A	D	4A
C18	A	D	4A
C19	A	D	4B
C20	A	D	8C
C21	A	D	5C
C22	A	D	5A
C23	A	D	6A
C24	A	D	6B
C25	A	D	6B
C26	A	D	4C
C27	A	D	6A
C28	A	D	6A
C29	A	D	6A
C30	A	D	6C
C31	A	D	6B
C32	A	D	6B
C33	A	D	6B
C34	A	D	5C
C35	A	D	7C
C36	A	D	8C
C37	A	D	8A
C38	A	D	8C
C39	A	D	5B
C40	A	D	7C
C42	A	D	8B
C43	A	D	7B
C44	A	D	8B
C45	A	D	6B
C46	A	D	6A
C47	A	D	6C
C48	A	D	7A
C50	A	D	5C
C51	A	D	8B
C52	A	D	5B
CONNECTOR			
CN1	A	D	6C
CN2	A	D	6C
CN3	A	D	7C
CN4	A	D	8C
CN5	A	D	8C
CN6	A	D	7C
CN101	A	D	1A
DIODE			
D1	A	D	3A
D2	A	D	3A
D3	A	D	3B
D4	A	D	2B
D5	A	D	4B
D6	A	D	4B
D7	A	D	4B
D8	A	D	4A
D9	A	D	4A
D10	A	D	4A
D11	A	D	5C
D12	A	D	5A
D13	A	D	5A
D14	A	D	5B
D15	A	D	5B
D16	A	D	5C
D17	A	D	8A
D18	A	D	8A
D19	A	D	5A
D20	A	D	6A
D21	A	D	7A
D22	A	D	5C
D24	A	D	7C
D25	A	D	8B
D26	A	D	5A
D27	A	D	5A
D34	A	D	5A
D35	A	D	5C
D36	A	D	3B
D37	A	D	3B
D38	A	D	3B
D39	A	D	4A
D40	A	D	8B
D41	A	D	8B
FUSE			
F1	A	D	1C
IC			
IC1	A	D	4A
IC2	A	D	6A
IC3	A	D	8A
IC4	A	D	8A
COIL			
L1	A	D	6B
L2	A	D	6C
L3	A	D	6B
L4	A	D	7A
TRANSISTOR			
Q1	A	D	4B
Q3	A	D	3B
Q4	A	D	7B
Q5	A	D	7B
Q6	A	D	7A
Q7	A	D	8B
Q8	A	D	8A
RESISTOR			
R3	A	D	3B
R4	A	D	3B
R5	A	D	3A
R6	A	D	4C
R7	A	D	4C
R8	A	D	4A
R9	A	D	4A
R10	A	D	3A
R11	A	D	4B
R12	A	D	4A
R13	A	D	4A
R15	A	D	5C
R16	A	D	5A
R17	A	D	5C
R18	A	D	5A
R19	A	D	6A
R20	A	D	6A
R21	A	D	6A
R22	A	D	6A
R23	A	D	8A
R24	A	D	6A
R25	A	D	6C
R26	A	D	6C
R27	A	D	6C
R28	A	D	6B
R29	A	D	6A
R30	A	D	6A
R31	A	D	6A
R33	A	D	7A
R34	A	D	8A
R35	A	D	8A
R36	A	D	7B
R37	A	D	7B
R41	A	D	7B
R43	A	D	7A
R44	A	D	7A
R45	A	D	7A
R46	A	D	8A
R47	A	D	8A
R48	A	D	8A
R49	A	D	7B
R51	A	D	6A
R52	A	D	6A
R54	A	D	5C
R55	A	D	8A
R56	A	D	8B
R57	A	D	7A
R58	A	D	8B
TEST POINT			
TP1	A	D	3C
OTHERS			
K1	A	D	4B
K2	A	D	4B
K3	A	D	5B
K4	A	D	4C
K5	A	D	3C
K6	A	D	6C
LF1	A	D	2B
LF2	A	D	2A
PC1	A	D	5A
T1	A	D	4B

REF. NO.	LOCATION		
IC ◀			
IC101	B	C	6 A

Cateqory : IC

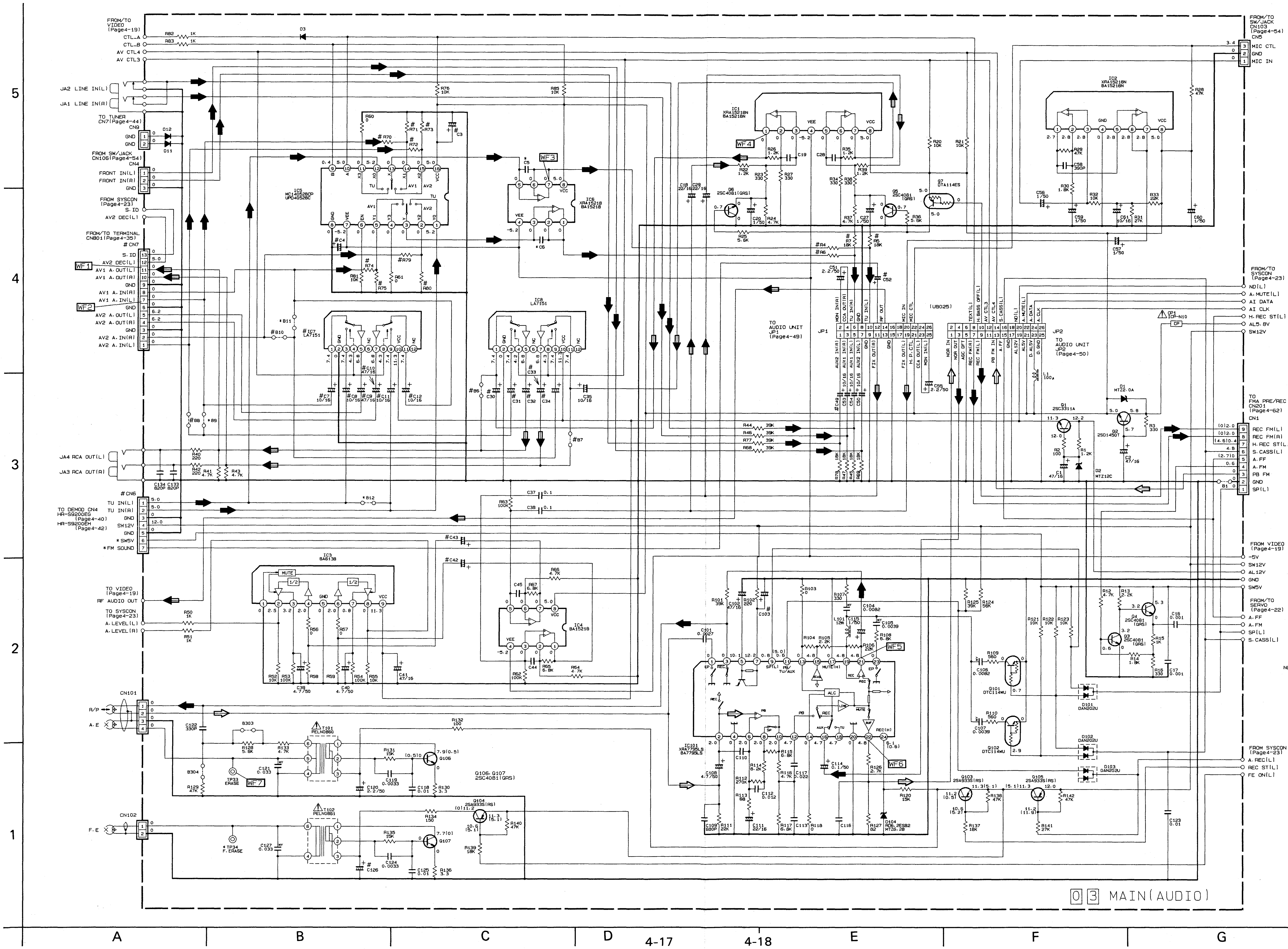
B : Foil side
(A : Component side)

C : Chip Component
(D : Discrete component)

Horizontal "A" zone

Vertical "6" zone

4.7 AUDIO SCHEMATIC DIAGRAM

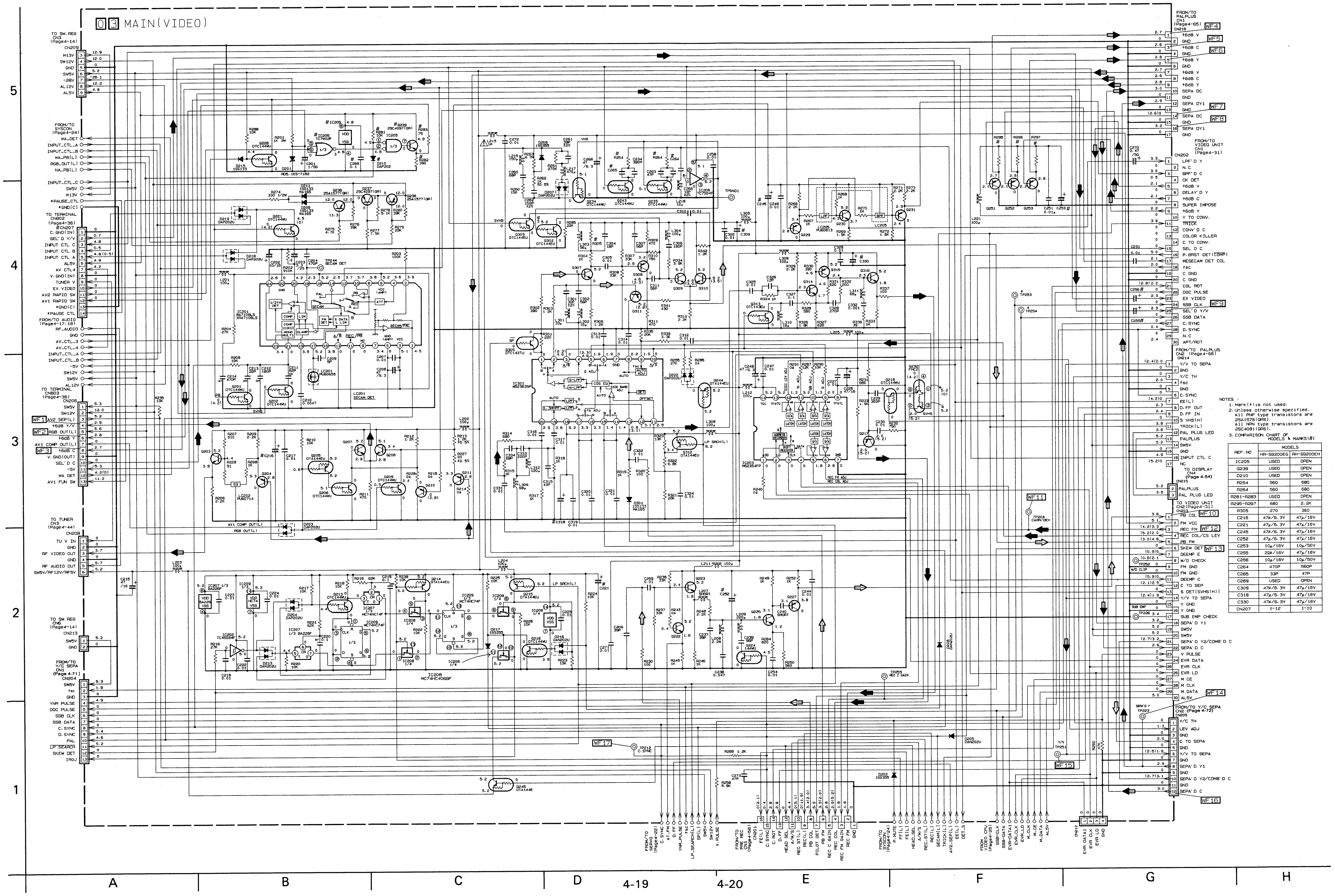

FROM/TO VIDEO (Page4-19)
CTL_A
CTL_B
AV CTL4
AV CTL3
JA2 LINE IN(L)
JA1 LINE IN(R)
TO TUNER CN7(Page4-44)
CN9
FROM SW/JACK CN106(Page4-54)
CN4
FRONT IN(L)
FRONT IN(R)
FROM SYSCON (Page4-23)
S.ID
AV2 DEC(L)
FROM/TO TERMINAL CN801(Page4-35)
#CN7
WF1
WF2
AV2 DEC(L)
AV1 A.OUT(L)
AV1 A.OUT(R)
AV1 A.IN(R)
AV1 A.IN(L)
AV2 A.OUT(L)
AV2 A.OUT(R)
AV2 A.IN(R)
AV2 A.IN(L)
JA4 RCA OUT(L)
JA3 RCA OUT(R)
#CN6
TU IN(L)
TU IN(R)
TO DEMOD CN4 HR-S9200EG (Page4-40) HR-S9200EH (Page4-42)
SW12V
*SW5V
*FM SOUND
TO VIDEO (Page4-19)
RF AUDIO OUT
TO SYSCON (Page4-23)
A.LEVEL(L)
A.LEVEL(R)
CN101
R/P
A.E
CN102
F.E
IC5 MC14052BCP UPD4052BC
IC6 XRA15218 BA15218
WF3
IC7 LA7151
IC8 LA7151
IC3 BA6138
IC4 BA15218
IC1 XRA15218N BA15218N
WF4
IC2 XRA15218N BA15218N
TO AUDIO UNIT JP1 (Page4-49)
TO AUDIO UNIT JP2 (Page4-50)
IC101 XRA7795LS BA7795LS
WF5
WF6
WF7
T101 PELN0860
T102 PELN0861
Q106, Q107 2SC4081(QRS)
TP33 ERASE
TP34 F.ERASE
FROM/TO SW/JACK CN103 (Page4-54)
CN5
MIC CTL
GND
MIC IN
FROM/TO SYSCON (Page4-23)
ND(L)
A.MUTE(L)
AI DATA
AI CLK
H.REC ST(L)
AL5.8V
SW12V
TO FMA PRE/REC CN201 (Page4-62)
CN1
REC FM(L)
REC FM(R)
H.REC ST(L)
S.CASS(L)
A.FF
A.FM
PB FM
GND
SP(L)
FROM VIDEO (Page4-19)
-5V
SW12V
AL12V
GND
SW5V
FROM/TO SERVO (Page4-22)
A.FF
A.FM
SP(L)
S.CASS(L)
FROM SYSCON (Page4-23)
A.REC(L)
REC ST(L)
FE ON(L)
03 MAIN(AUDIO)
5
4
3
2
1
A
B
C
D
E
F
G
H

NOTES :

1. Mark(*)is not used.
2. COMPARISON CHART OF MODELS & MARKS(#)

REF.NO	MODELS	
	HR-S9200EG	RH-S9200EH
IC7, IC8	USED	OPEN
R4, R6	39K	0
R5, R7	USED	OPEN
R70, R72	100	47K
R71, R73	100K	15K
R74, R79	100	47K
R75, R80	100K	15K
C3, C4	10μ/16V	10μ/50V
C7~C12	USED	OPEN
C30, C31	10μ/16V	10μ/50V
C34, C35	10μ/16V	10μ/50V
C42, C43	10μ/16V	10μ/50V
C49, C52	10μ/16V	10μ/50V
C103, C126	10μ/16V	10μ/50V
B6, B7	OPEN	USED
B8, B10	USED	OPEN
CN6	1-5	1-7
CN7	1-13	1-11

4.8 VIDEO SCHEMATIC DIAGRAM

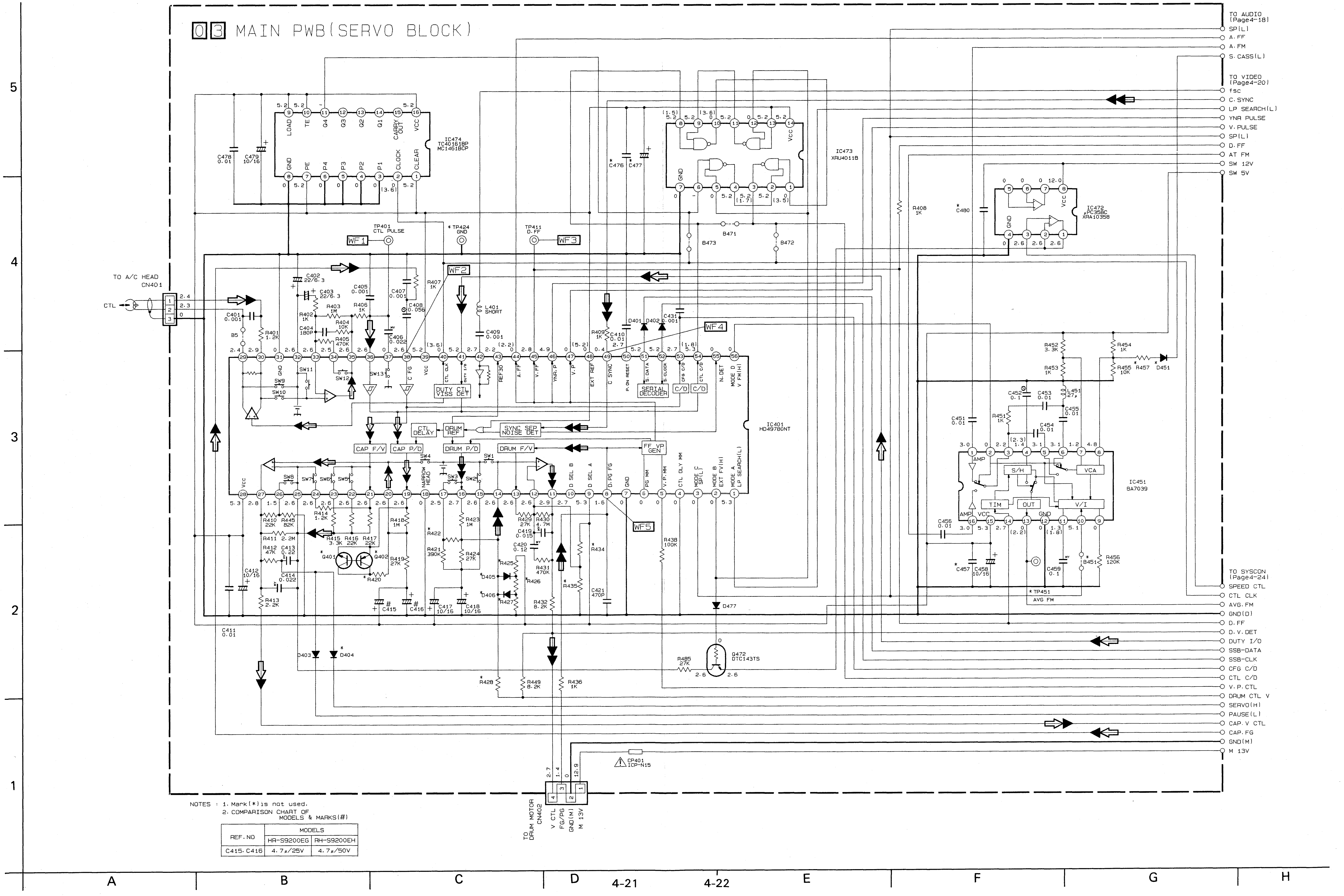

03 MAIN(VIDEO)
TO SW.REG CN3 (Page4-14) CN209
FROM/TO SYSCON (Page4-24)
TO TERMINAL CN802 (Page4-35) CN207
TO TERMINAL CN803 (Page4-35) CN206
TO TUNER CN3 (Page4-44) CN208
TO SW.REG CN6 (Page4-14) CN213
FROM/TO Y/C SEPA CN1 (Page 4-71) CN204
FROM/TO PALPLUS CN1 (Page4-65) CN216
FROM/TO VIDEO UNIT CN1 (Page4-31) CN202
FROM/TO PALPLUS CN2 (Page4-66) CN214
TO DISPLAY CN4 (Page 4-54) CN215
TO VIDEO UNIT CN2 (Page4-31) CN203
FROM/TO Y/C SEPA CN2 (Page4-72) CN205
FROM/TO SERVO (Page4-22)
FROM/TO RME CN1 (Page4-58) CN201
FROM/TO SYSCON (Page4-24)
FROM VIDEO CPU (Page4-25)
CN212
IC201 BA7106LS
IC202 TC4S66F
IC203 M52354FP
IC205 TC7W02F
IC207 1/3 BA226F
IC208 MC74HC4066F
IC209 1/2 MC74HC74F
IC301 M52363SP
LC201 SECAM DET
WF1
WF2
WF3
WF4
WF5
WF6
WF7
WF8
WF9
WF10
WF11
WF12
WF13
WF14
WF15
WF16
WF17
1
2
3
4
5
A
B
C
D
E
F
G
H

NOTES :

1. Mark(*)is not used.
2. Unless otherwise specified.
   All PNP type transistors are 2SA1576(QRS).
   All NPN type transistors are 2SC4081(QRS).
3. COMPARISON CHART OF MODELS & MARKS(#)

REF.NO	MODELS	
	HR-S9200EG	HR-S9200EH
IC205	USED	OPEN
Q239	USED	OPEN
D210	USED	OPEN
R254	560	680
R264	560	680
R281~R283	USED	OPEN
R295~R297	680	2.2K
R305	270	360
C216	47μ/6.3V	47μ/16V
C221	47μ/6.3V	47μ/16V
C245	47μ/6.3V	47μ/16V
C252	47μ/6.3V	47μ/16V
C253	10μ/16V	10μ/50V
C255	22μ/16V	47μ/16V
C256	10μ/16V	10μ/50V
C264	470P	560P
C265	33P	47P
C269	USED	OPEN
C309	47μ/6.3V	47μ/16V
C318	47μ/6.3V	47μ/16V
C330	47μ/6.3V	47μ/16V
CN207	1~12	1~10

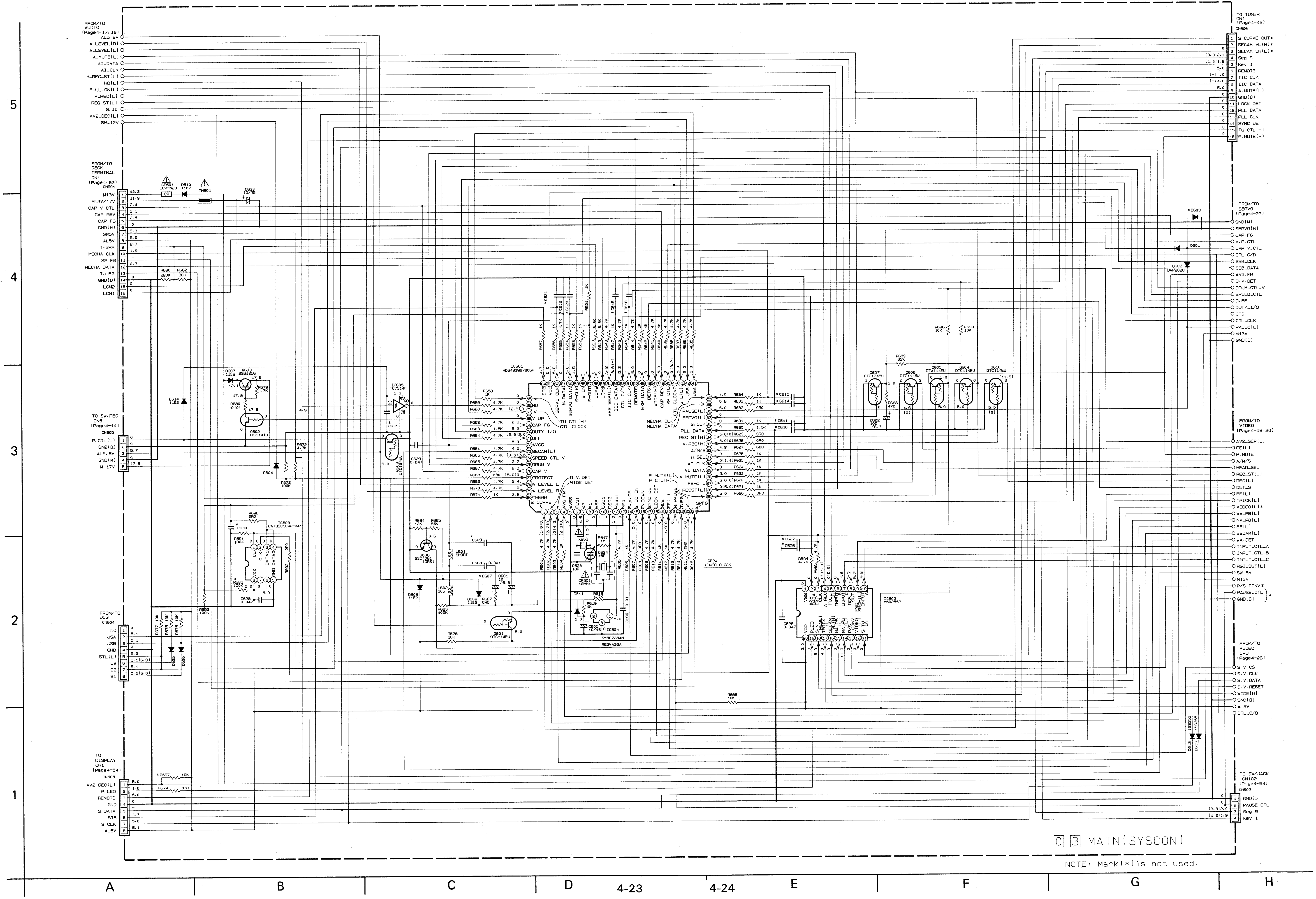
4.9 SERVO SCHEMATIC DIAGRAM


03 MAIN PWB(SERVO BLOCK)
IC474 TC40161BP MC14161BCP
IC473 XRU4011B
IC472 μPC358C XRA10358
IC401 HD49780NT
IC451 BA7039
Q472 DTC143TS
Q401
Q402
TO A/C HEAD CN401
CTL
TP401 CTL PULSE
TP424 GND
TP411 D.FF
TP451 AVG FM
WF1
WF2
WF3
WF4
WF5
CP401 ICP-N15
TO DRUM MOTOR CN402
V CTL
FG/PG
GND(M)
M 13V
TO AUDIO (Page4-18)
SP(L)
A.FF
A.FM
S.CASS(L)
TO VIDEO (Page4-20)
fsc
C.SYNC
LP SEARCH(L)
YNR PULSE
V.PULSE
SP(L)
D.FF
AT FM
SW 12V
SW 5V
TO SYSCON (Page4-24)
SPEED CTL
CTL CLK
AVG.FM
GND(D)
D.FF
D.V.DET
DUTY I/O
SSB-DATA
SSB-CLK
CFG C/D
CTL C/D
V.P.CTL
DRUM CTL V
SERVO(H)
PAUSE(L)
CAP.V CTL
CAP.FG
GND(M)
M 13V
CAP F/V
CAP P/D
DRUM P/D
DRUM F/V
CTL DELAY
DRUM REF
SYNC SEP NOISE DET
DUTY CTL VISS DET
SERIAL DECODER
FF VP GEN
S/H
VCA
TIM
OUT
V/I
AMP
1
2
3
4
5
A
B
C
D
E
F
G
H

NOTES : 1. Mark(*)is not used.
2. COMPARISON CHART OF MODELS & MARKS(#)

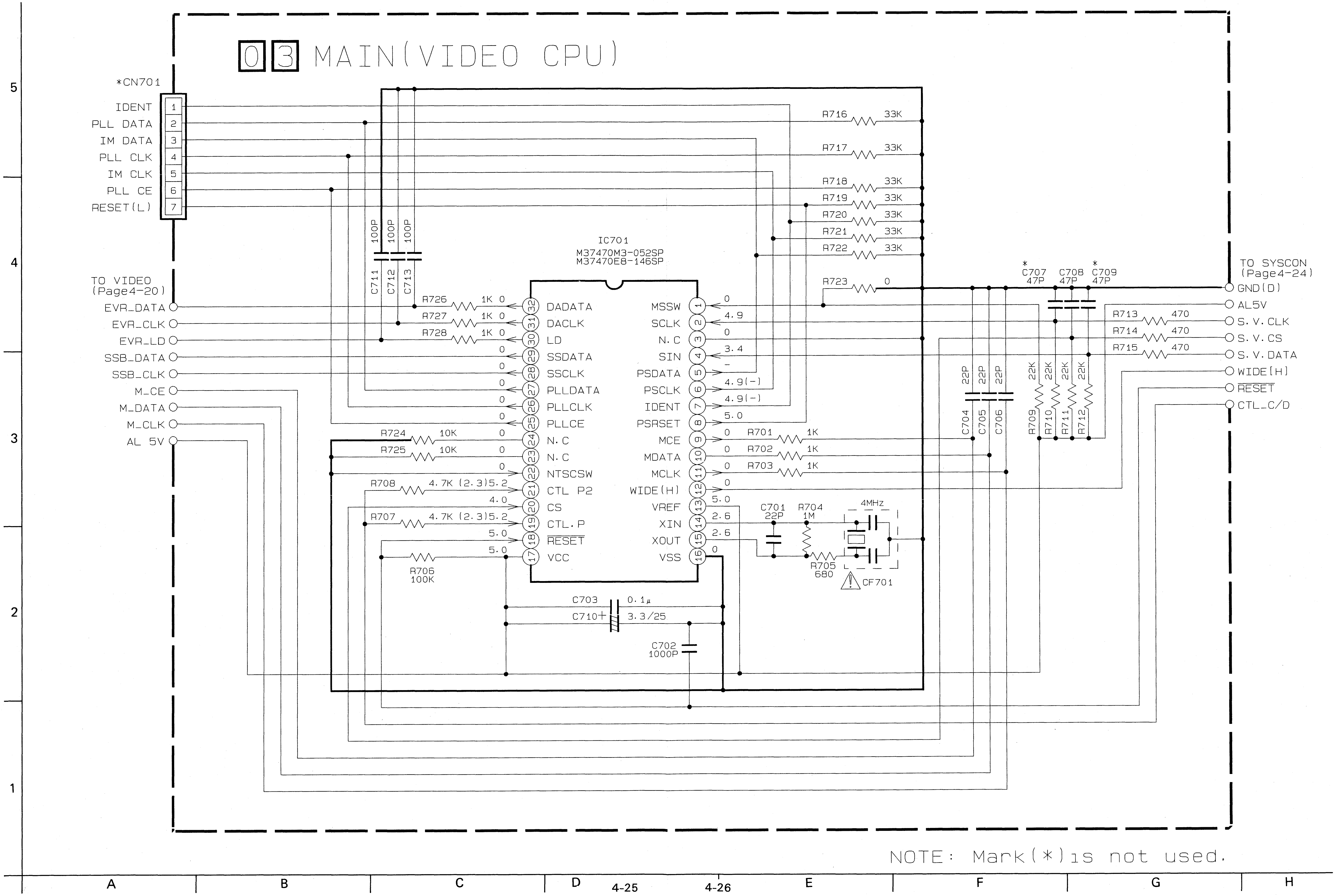
REF.NO	MODELS	
	HR-S9200EG	RH-S9200EH
C415, C416	4.7μ/25V	4.7μ/50V

4.10 SYSTEM CONTROL SCHEMATIC DIAGRAM


FROM/TO AUDIO (Page4-17, 18)
AL5.8V
A_LEVEL(R)
A_LEVEL(L)
A_MUTE(L)
AI_DATA
AI_CLK
H_REC_ST(L)
ND(L)
FULL_ON(L)
A_REC(L)
REC_ST(L)
S.ID
AV2_DEC(L)
SW_12V
FROM/TO DECK TERMINAL CN1 (Page4-63) CN601
M13V
M13V/17V
CAP V CTL
CAP REV
CAP FG
GND(M)
SW5V
AL5V
THERM
MECHA CLK
SP FG
MECHA DATA
TU FG
GND(D)
LCM2
LCM1
CP601 ICP-N20
D610 11E2
TH601
C633 10/25
R690 220K
R682 30K
TO SW.REG CN5 (Page4-14) CN605
P.CTL(L)
GND(D)
AL5.8V
GND(M)
M 17V
FROM/TO JOG CN604
NC
JSA
JSB
GND
STL(L)
J2
C2
S1
TO DISPLAY CN1 (Page4-54) CN603
AV2 DEC(L)
P.LED
REMOTE
GND
S-DATA
STB
S.CLK
AL5V
IC601 HD6433927806F
IC605 TC7S14F
IC603 CAT35C104P-041
IC604 S-80728AN RE5VA28A
IC602 M50255P
X601
CF601 10MHz
C624 TIMER CLOCK
Q601 DTC114EU
Q602 DTC114TU
Q603 2SB1256
Q604 DTC114EU
Q605 DTA114EU
Q606 DTC114EU
Q607 DTC124EU
Q608 2SC4081 (QRS)
Q609 DTC124EU
Q610 DTC114EU
TO TUNER CN1 (Page4-43) CN606
S-CURVE OUT*
SECAM VL(H)*
SECAM ON(L)*
Seg 9
Key 1
REMOTE
IIC CLK
IIC DATA
A.MUTE(L)
GND(D)
LOCK DET
PLL DATA
PLL CLK
SYNC DET
TU CTL(H)
P.MUTE(H)
FROM/TO SERVO (Page4-22)
GND(M)
SERVO(H)
CAP.FG
V.P.CTL
CAP.V_CTL
CTL_C/D
SSB_CLK
SSB_DATA
AVG.FM
D.V.DET
DRUM_CTL_V
SPEED_CTL
D.FF
DUTY_I/O
CFG
CTL_CLK
PAUSE(L)
M13V
GND(D)
*D603
D601
D602 DAP202U
FROM/TO VIDEO (Page4-19, 20)
AV2_SEP(L)
FE(L)
P.MUTE
A/M/S
HEAD_SEL
REC_ST(L)
REC(L)
DET_S
FF(L)
TRICK(L)
VIDEO(L)*
WA_PB(L)
NA_PB(L)
EE(L)
SECAM(L)
WA_DET
INPUT_CTL_A
INPUT_CTL_B
INPUT_CTL_C
RGB_OUT(L)
SW_5V
M13V
P/S_CONV*
PAUSE_CTL
GND(D)
*
FROM/TO VIDEO CPU (Page4-26)
S.V.CS
S.V.CLK
S.V.DATA
S.V.RESET
WIDE(H)
GND(D)
AL5V
CTL_C/D
D612 1SS355
D613 1SS355
TO SW/JACK CN102 (Page4-54) CN602
GND(D)
PAUSE CTL
Seg 9
Key 1
03 MAIN(SYSCON)
A
B
C
D
E
F
G
H
1
2
3
4
5

NOTE: Mark(*)is not used.

4.11 VIDEO CPU SCHEMATIC DIAGRAM

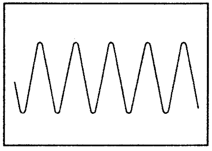

03 MAIN(VIDEO CPU)
*CN701
IDENT 1
PLL DATA 2
IM DATA 3
PLL CLK 4
IM CLK 5
PLL CE 6
RESET(L) 7
TO VIDEO (Page4-20)
EVR_DATA
EVR_CLK
EVR_LD
SSB_DATA
SSB_CLK
M_CE
M_DATA
M_CLK
AL 5V
C711 100P
C712 100P
C713 100P
IC701
M37470M3-052SP
M37470E8-146SP
R726 1K 0
R727 1K 0
R728 1K 0
R724 10K
R725 10K
R708 4.7K (2.3)5.2
R707 4.7K (2.3)5.2
R706 100K
32 DADATA
31 DACLK
30 LD
29 SSDATA
28 SSCLK
27 PLLDATA
26 PLLCLK
25 PLLCE
24 N.C
23 N.C
22 NTSCSW
21 CTL P2
20 CS
19 CTL.P
18 RESET
17 VCC
1 MSSW
2 SCLK
3 N.C
4 SIN
5 PSDATA
6 PSCLK
7 IDENT
8 PSRSET
9 MCE
10 MDATA
11 MCLK
12 WIDE(H)
13 VREF
14 XIN
15 XOUT
16 VSS
0
4.9
0
3.4
-
4.9(-)
4.9(-)
5.0
0
0
0
0
5.0
2.6
2.6
0
4.0
5.0
5.0
R716 33K
R717 33K
R718 33K
R719 33K
R720 33K
R721 33K
R722 33K
R723 0
R701 1K
R702 1K
R703 1K
C701 22P
R704 1M
R705 680
4MHz
CF701
C703 0.1μ
C710 3.3/25
C702 1000P
*C707 47P
C708 47P
*C709 47P
C704 22P
C705 22P
C706 22P
R709 22K
R710 22K
R711 22K
R712 22K
R713 470
R714 470
R715 470
TO SYSCON (Page4-24)
GND(D)
AL5V
S.V.CLK
S.V.CS
S.V.DATA
WIDE(H)
RESET
CTL_C/D
1
2
3
4
5
A
B
C
D
E
F
G
H

NOTE: Mark(*) is not used.

WAVEFORMS

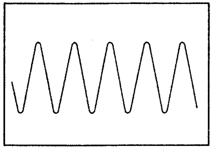
—AUDIO—

WF1 CN7-11 AV1 OUT(L)



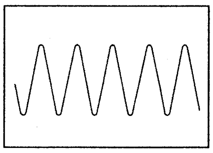
REC/PB1.0Vp-p
50mV/1msec/DIV

WF2 CN7-7 AV1 IN(L)



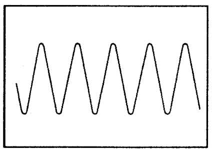
REC0.7Vp-p
50mV/1msec/DIV

WF3 IC6-7



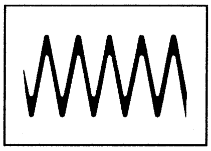
REC0.7Vp-p
50mV/1msec/DIV

WF4 IC1-1



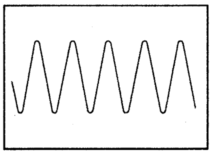
REC/PB1.0Vp-p
50mV/1msec/DIV

WF5 IC101-21



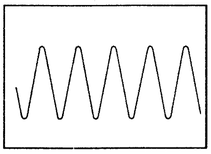
REC1.6Vp-p
50mV/1msec/DIV

WF6 IC101-22



PB1.2Vp-p
50mV/1msec/DIV

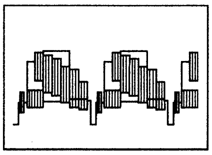
WF7 TP33 ERASE



REC42.0Vp-p
2V/20μsec/DIV

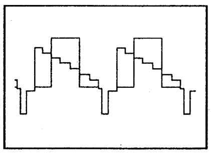
—VIDEO—

WF1 CN206-4 +6dB Y/V



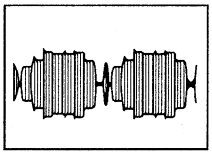
REC/PB2.1Vp-p
0.1V/20μsec/DIV

WF2 CN206-6 +6dB Y



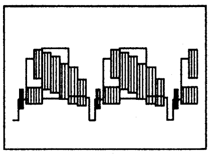
REC/PB2.1Vp-p
0.1V/20μsec/DIV

WF3 CN206-8 +6dB C



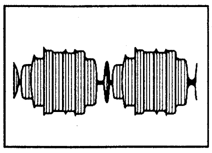
REC/PB1.4Vp-p
50mV/20μsec/DIV

WF4 CN216-1 +6dB V



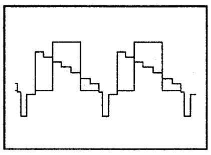
REC/PB2.3Vp-p
0.1V/20μsec/DIV

WF5 CN216-3 +6dB C



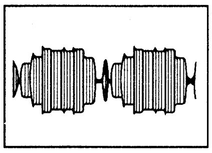
REC/PB1.4Vp-p
50mV/20μsec/DIV

WF6 CN216-5 +6dB Y



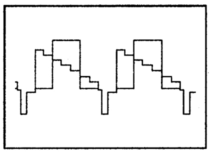
REC/PB2.2Vp-p
0.1V/20μsec/DIV

WF7 CN216-14 SEPA'D C



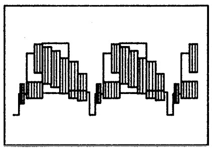
REC/PB0.66Vp-p
20mv/20μsec/DIV

WF8 CN216-16 SEPA'D Y1



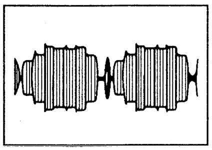
REC/PB1.1Vp-p
50mV/20μsec/DIV

WF9 CN202-25 SEL'D Y/V



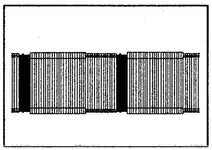
REC1.0Vp-p
50mV/20μsec/DIV

WF10 CN203-1 PB COLOR



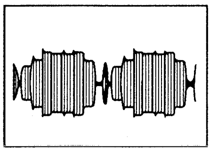
PB0.4Vp-p
20mV/20μsec/DIV

WF11 TP204 CARR/DEV



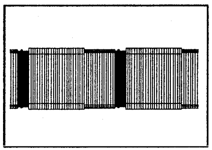
REC0.56Vp-p
20mV/5msec/DIV

WF12 CN203-4 REC COLOR



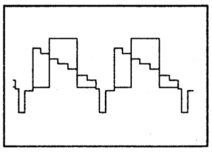
REC0.5Vp-p
20mV/20μsec/DIV

WF13 CN203-5 PB FM



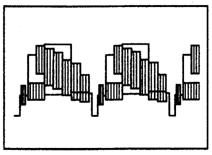
PB0.48Vp-p
20mV/5msec/DIV

WF14 TP223 SEPA'D Y



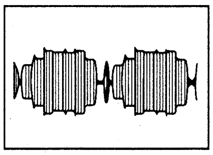
REC/PB1.1Vp-p
50mV/20μsec/DIV

WF15 TP251 Y/V



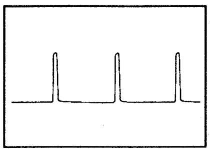
REC/PB1.1Vp-p
50mV/20μsec/DIV

WF16 CN205-12 SEPA'D C



REC/ PB0.68Vp-p
20mV/20μsec/DIV

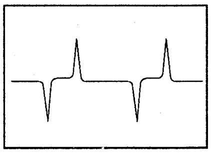
WF17 TP212 C.SYNC



REC/PB4.8Vp-p
0.2V/20μsec/DIV

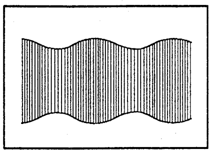
—SERVO—

WF1 TP401 CTL PULSE



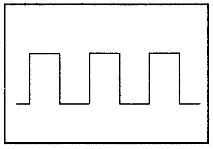
PB2.6Vp-p
0.1V/10msec/DIV

WF2 IC401-38 C.FG



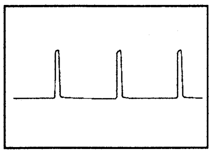
REC/PB2.5Vp-p
0.1V/10msec/DIV

WF3 TP411 DRUM FF



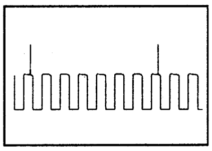
REC/PB5.6Vp-p
0.2V/10msec/DIV

WF4 IC401-49 C.SYNC

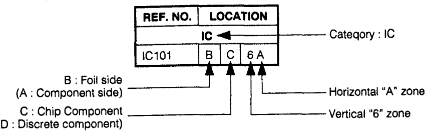


REC/PB4.4Vp-p
0.2V/20μsec/DIV

WF5 IC401-8 D.PG/FG



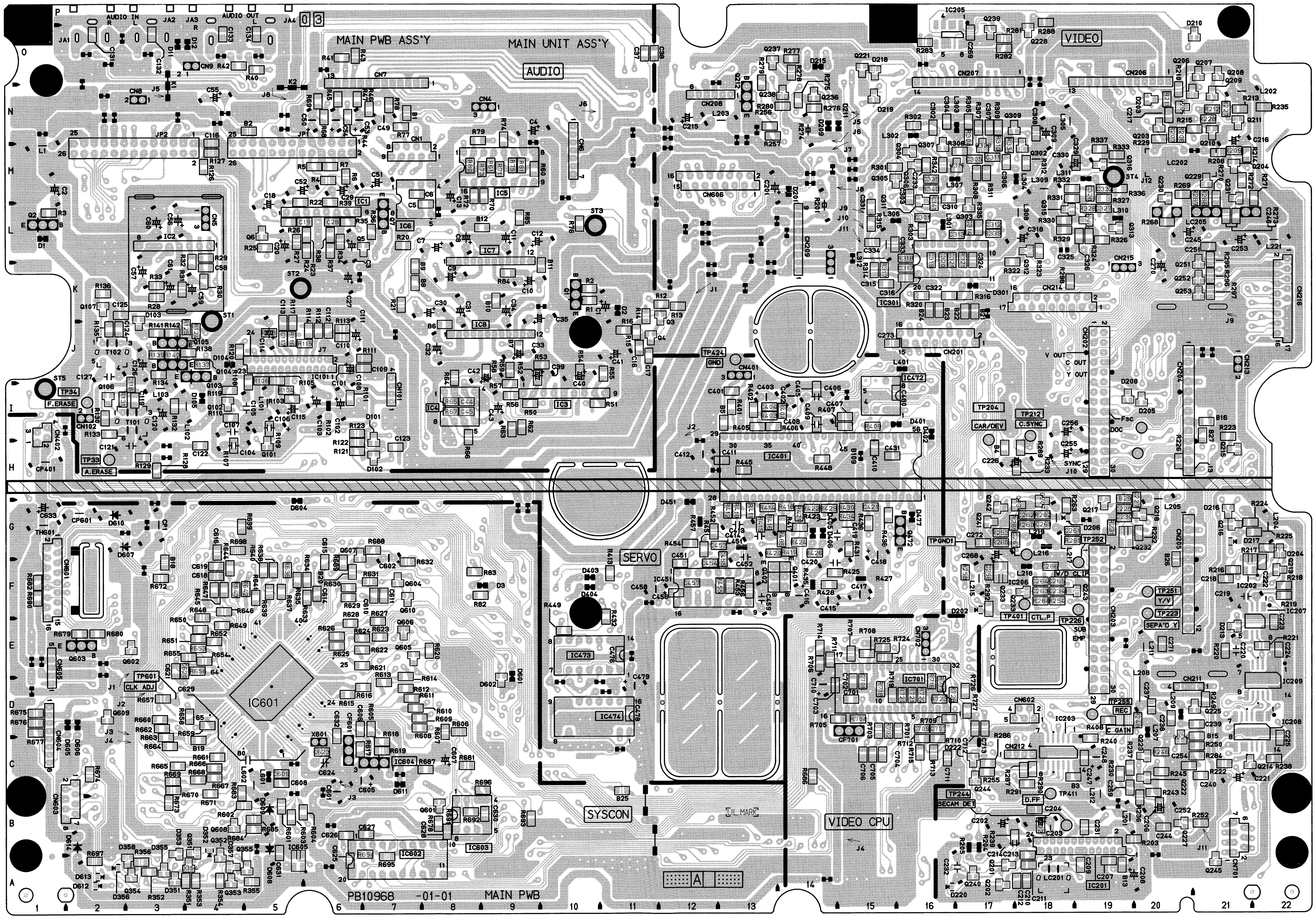
REC/PB4.0Vp-p
0.2V/10msec/DIV



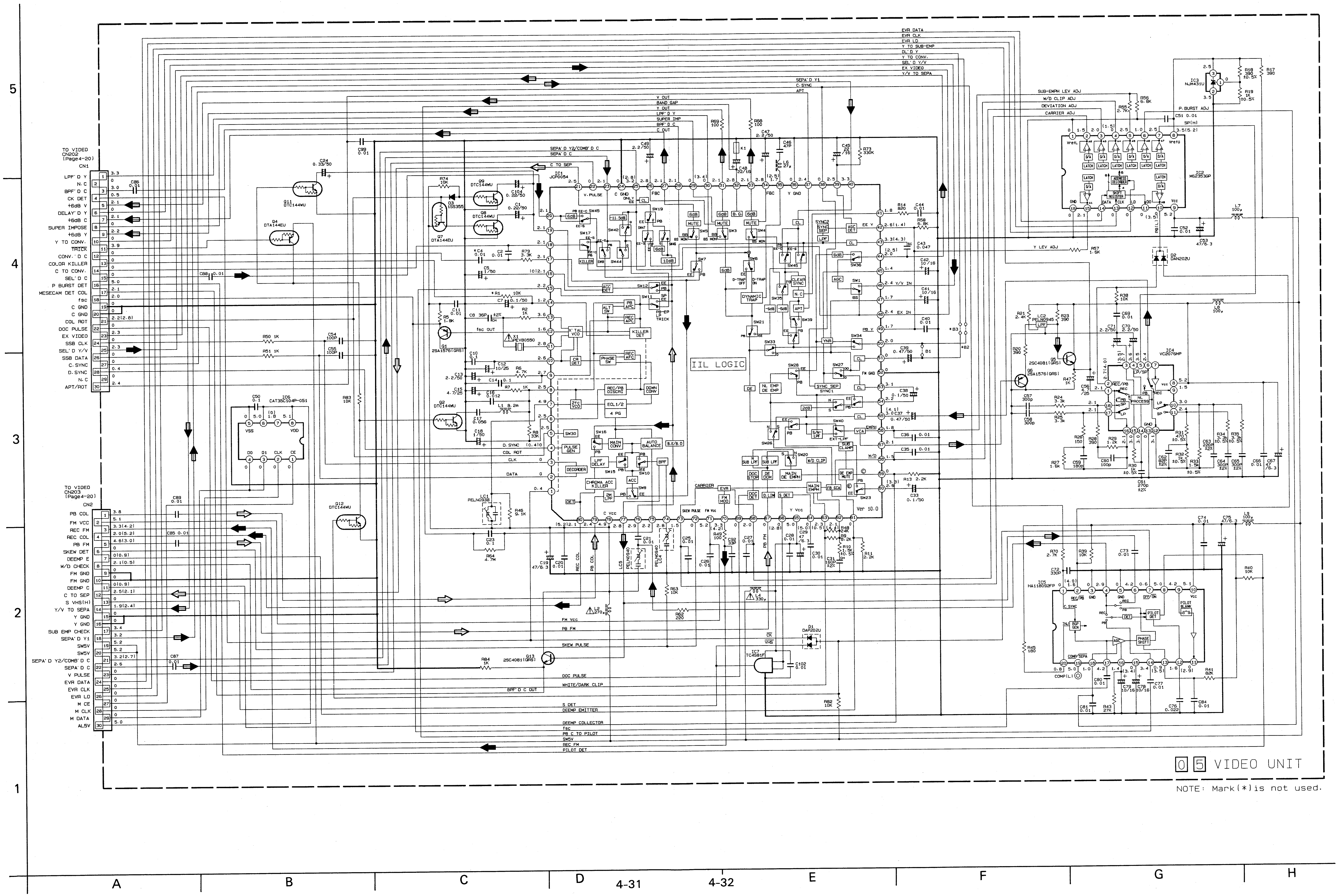
COMPONENT PARTS LOCATION GUIDE

REF.NO.	LOCATION		
CAPACITOR			
C1	A	D	11K
C2	A	D	1M
C3	A	D	6K
C4	A	D	10N
C5	B	C	8L
C6	B	C	7M
C7	A	D	8L
C8	A	D	8L
C9	A	D	8K
C10	A	D	9K
C11	A	D	9L
C12	A	D	9L
C13	A	D	8L
C16	B	C	11J
C17	B	C	11J
C18	A	D	5L
C19	B	C	6L
C20	A	D	5L
C27	A	D	6L
C28	B	C	6L
C29	A	D	6M
C30	A	D	8K
C31	A	D	8K
C32	A	D	8J
C33	A	D	9J
C34	A	D	9K
C35	A	D	9K
C37	B	C	11O
C38	B	C	11O
C39	A	D	10J
C40	A	D	10J
C41	A	D	11J
C42	A	D	8J
C43	A	D	9I
C44	B	C	8I
C45	B	C	8I
C49	A	D	7N
C50	A	D	6N
C51	A	D	7M
C52	A	D	6M
C53	A	D	6N
C54	A	D	6N
C55	A	D	4N
C56	A	D	3L
C57	A	D	3L
C58	B	C	4K
C59	A	D	4K
C60	A	D	3L
C61	A	D	3K
C101	B	C	6J
C102	A	D	6I
C103	A	D	6I
C104	A	D	5H
C105	A	D	5I
C106	A	D	5I
C107	A	D	4I
C108	A	D	6J
C109	B	C	7J
C110	B	C	6J
C111	A	D	6J
C112	B	C	6J
C113	B	C	5J
C114	A	D	5J
C115	A	D	5I
C116	B	C	4N
C117	B	C	5J
C118	B	C	3I
C119	B	C	3I
C120	A	D	3I
C121	A	D	3H
C122	B	C	4H
C123	B	C	7H
C124	B	C	2J
C125	B	C	2K
C126	A	D	3J
C127	A	D	2J
C131	B	C	2O
C132	B	C	3O
C133	B	C	4O
C134	B	C	5O
C201	A	D	13M
C202	A	D	17B
C203	A	D	18B
C204	B	C	18B
C206	B	C	20B
C207	B	C	19A
C208	A	D	20A
C209	B	C	19A
C210	B	C	18A
C211	B	C	18A
C212	B	C	18A
C213	B	C	18A
C214	A	D	18B
C215	A	D	12N
C216	A	D	21N
C217	B	C	20N
C218	B	C	21F
C219	A	D	22F
C220	A	D	21E
C221	A	D	21C
C222	B	C	22F
C223	B	C	22E
C224	B	C	22E
C225	B	C	22C
C226	A	D	17H
C227	B	C	20G
C229	B	C	19G
C230	B	C	19G
C231	B	C	19B
C232	A	D	17A
C233	B	C	16M
C234	B	C	18F
C237	B	C	20D
C238	B	C	20D
C239	B	C	21D
C240	B	C	21C
C244	B	C	20B
C245	A	D	21L
C246	B	C	21L
C247	B	C	19C
C248	A	D	19C
C251	B	C	21L
C252	A	D	20B
C253	A	D	21L
C254	B	C	20C
C255	A	D	19H
C256	A	D	19I
C258	B	C	17F
C259	B	C	19C
C260	B	C	18G
C261	B	C	18G
C262	B	C	18G
C263	B	C	18F
C264	B	C	18F
C265	B	C	18F
C266	B	C	18F
C267	B	C	18G
C268	A	D	17G
C269	B	C	17O
C270	A	D	20K
C271	B	C	20E
C272	B	C	17G
C273	B	C	15J
C301	B	C	16L
C302	B	C	16N
C303	B	C	16M
C304	B	C	16N
C305	B	C	17M
C306	B	C	17M
C307	B	C	17N
C308	B	C	18N
C309	A	D	18N
C310	B	C	16M
C311	B	C	17M
C312	B	C	17L
C313	B	C	17L
C314	B	C	17L
C315	B	C	15K
C316	B	C	16K
C317	B	C	16K
C318	A	D	18L
C319	B	C	16L
C320	B	C	16L
C321	B	C	16L
C322	B	C	16K
C324	B	C	17L
C325	A	D	18L
C326	B	C	19L
C327	B	C	19L
C328	B	C	19M
C329	B	C	19M
C330	A	D	18M
C331	B	C	15L
C332	B	C	19M
C333	B	C	15L
C334	B	C	15L
C335	B	C	16M
C401	B	C	13I
C402	A	D	14I
C403	A	D	13I
C404	B	C	13I
C405	B	C	14I
C406	A	D	14I
C407	B	C	15I
C408	A	D	14I
C409	B	C	14I
C410	B	C	15H
C411	B	C	13H
C412	A	D	12H
C413	A	D	13G
C414	A	D	13G
C415	A	D	14F
C416	A	D	14F
C417	A	D	15F
C418	A	D	15G
C419	A	D	15G
C420	A	D	15F
C421	B	C	15G
C431	B	C	15H
C451	B	C	12F
C452	A	D	13G
C453	B	C	13G
C454	B	C	12F
C455	B	C	13F
C456	B	C	12F
C457	B	C	12F
C458	A	D	12F
C459	A	D	13F
C476	B	C	11E
C478	B	C	11D
C479	A	D	11D
C480	B	C	16I
C601	A	D	6C
C602	A	D	7G
C605	A	D	7C
C606	B	C	6D
C607	A	D	8C
C608	B	C	5C
C609	B	C	5C
C610	B	C	7F
C611	B	C	7F
C614	B	C	6F
C615	B	C	6F
C616	B	C	4G
C618	B	C	4F
C619	B	C	4F
C620	B	C	4E
C621	B	C	3E
C623	B	C	6C
C624	A	D	6C
C625	B	C	6A
C626	B	C	6B
C627	B	C	7B
C628	B	C	8B
C630	B	C	9B
C631	B	C	5B
C632	B	C	6D
C633	A	D	1G
C701	B	C	15D
C702	B	C	15D
C703	B	C	14D
C704	B	C	15C
C705	B	C	15C
C706	B	C	15C
C707	B	C	16D
C708	B	C	15D
C709	B	C	16D
C710	A	D	14D
C711	B	C	16C
C712	B	C	17D
C713	B	C	17D
CONNECTOR			
CN1	A	D	8M
CN4	A	D	9N
CN5	A	D	4L
CN6	A	D	10N
CN7	A	D	8O
CN8	A	D	3N
CN9	A	D	4O
CN101	A	D	7I
CN102	A	D	2I
CN201	A	D	17J
CN202	A	D	19J
CN203	A	D	19G
CN204	A	D	20J
CN205	A	D	20G
CN206	A	D	20O
CN207	A	D	18O
CN208	A	D	13N
CN209	A	D	14K
CN211	A	D	21D
CN212	A	D	17C
CN213	A	D	21J
CN214	A	D	19K
CN215	A	D	19K
CN216	A	D	22L
CN217	A	D	14K
CN401	A	D	13J
CN402	A	D	1H
CN601	A	D	1G
CN602	A	D	18D
CN603	A	D	2C
CN604	A	D	1D
CN605	A	D	1D
CN606	A	D	13M
CN701	A	D	21B
CN702	A	D	16E
CP			
CP1	A	D	3G
CP401	A	D	1H
CP601	A	D	2G
DIODE			
D1	A	D	1L
D2	A	D	11K
D3	A	D	8F
D11	A	D	3O
D12	A	D	4O
D101	B	C	7I
D102	B	C	7H
D103	B	C	3J
D104	A	D	4J
D105	A	D	4I
D201	A	D	14M
D202	B	C	17F
D203	B	C	20N
D204	B	C	22G
D205	B	C	20I
D206	B	C	18G
D207	B	C	18G
D208	B	C	19I
D209	A	D	14N
D210	B	C	21O
D211	A	D	15N
D213	B	C	21E
D215	A	D	14O
D216	B	C	21G
D217	B	C	21G
D218	B	C	15O
D219	B	C	15N
D220	B	C	16A
D222	B	C	17C
D301	A	D	17K
D351	B	C	3A
D352	B	C	4B
D353	B	C	3B
D354	B	C	4A
D355	B	C	3A
D356	B	C	2A
D357	B	C	4A
D358	B	C	3A
D401	A	D	15I
D402	A	D	16I
D403	A	D	11F
D404	A	D	11F
D405	A	D	14G
D406	A	D	14G
D451	A	D	12G
D477	A	D	16G
D601	A	D	9D
D602	B	C	9D
D604	A	D	5G
D605	A	D	2D
D606	A	D	2D
D607	A	D	3G
D608	A	D	5B
D609	A	D	5B
D610	A	D	3G
D611	A	D	7C
D612	B	C	2A
D613	B	C	2A
D614	A	D	2A
IC			
IC1	A	D	5L
IC2	A	D	4L
IC3	A	D	9I
IC4	A	D	8I
IC5	A	D	8M
IC6	A	D	7M
IC7	A	D	8L
IC8	A	D	8J
IC101	A	D	6J
IC201	A	D	19B
IC202	B	C	21F
IC203	B	C	18C
IC205	B	C	16O
IC206	B	C	17F
IC207	B	C	22E
IC208	B	C	22D
IC209	B	C	22D
IC301	A	D	16L
IC401	A	D	16H
IC451	A	D	12F
IC472	A	D	16I
IC473	A	D	11E
IC474	A	D	11D
IC601	B	C	5D
IC602	A	D	6B
IC603	A	D	8B
IC604	A	D	7C
IC605	B	C	5A
IC701	A	D	16D
COIL			
L1	A	D	1M
L101	A	D	5I
L102	A	D	4I
L103	A	D	3I
L201	A	D	19B
L202	A	D	22N
L203	A	D	12N
L204	A	D	22G
L205	A	D	20G
L207	A	D	20C
L208	A	D	20D
L209	A	D	20D
L211	A	D	20E
L212	A	D	19B
L215	A	D	17F
L216	A	D	18G
L217	A	D	18G
L218	A	D	18F
L219	A	D	18G
L221	A	D	22L
L301	A	D	16L
L302	A	D	16N
L303	A	D	17N
L304	A	D	18M
L305	A	D	18N
L306	A	D	15L
L307	A	D	17M
L308	A	D	18L
L309	A	D	18M
L310	A	D	19L
L311	A	D	19M
L312	A	D	15L
L401	A	D	15J
L451	A	D	13G
L601	A	D	5C
L602	A	D	5C
LC201	A	D	18A
LC202	A	D	21M
LC205	A	D	20L
TRANSISTOR			
Q1	A	D	10K
Q2	A	D	1L
Q3	B	C	12K
Q4	B	C	11J
Q5	B	C	7L
Q6	B	C	5L
Q7	A	D	7L
Q101	B	C	5H
Q102	B	C	4I
Q103	A	D	4J
Q104	A	D	3J
Q105	A	D	3J
Q106	B	C	2I
Q107	B	C	2K
Q201	B	C	17A
Q202	B	C	17A
Q203	B	C	20N
Q204	B	C	21M
Q205	B	C	20N
Q206	B	C	21N
Q207	B	C	21O
Q208	B	C	21O
Q209	B	C	21N
Q210	B	C	21N
Q211	B	C	21N
Q212	A	D	13N
Q213	B	C	22F
Q214	B	C	21C
Q215	B	C	21H
Q216	B	C	21G
Q217	B	C	19G
Q218	B	C	20G
Q221	B	C	15O
Q222	B	C	20C
Q223	B	C	20C
Q224	B	C	20C
Q225	B	C	21D
Q227	B	C	20B
Q228	B	C	18O
Q229	B	C	21M
Q230	B	C	20M
Q231	B	C	21M
Q232	B	C	19G
Q233	B	C	18F
Q234	B	C	18G
Q236	B	C	14N
Q237	B	C	13O
Q238	B	C	14N
Q239	B	C	17O
Q240	B	C	17A
Q241	B	C	17G
Q242	B	C	17G
Q243	B	C	18F
Q244	B	C	17C
Q245	B	C	21A
Q251	B	C	21K
Q252	B	C	21K
Q253	B	C	21K
Q302	B	C	18M
Q303	B	C	17L
Q304	B	C	16M
Q305	B	C	16M
Q306	B	C	16M
Q307	B	C	16M
Q308	B	C	17M
Q309	B	C	18N
Q310	B	C	17M
Q311	B	C	16M
Q312	B	C	18L
Q313	B	C	19L
Q314	B	C	19L
Q315	B	C	18L
Q316	B	C	19M
Q351	B	C	4B
Q352	B	C	4B
Q353	B	C	4A
Q354	B	C	3A
Q355	B	C	5A
Q401	A	D	14F
Q402	A	D	13F
Q472	A	D	16G
Q601	B	C	8B
Q602	B	C	3E
Q603	A	D	2E
Q604	B	C	7F
Q605	B	C	7E
Q606	B	C	7E
Q607	B	C	6G
Q608	B	C	4B
Q609	B	C	2D
Q610	B	C	7F
RESISTOR			
R1	B	C	10K
R2	B	C	10K
R3	B	C	1L
R4	B	C	6M
R5	B	C	6M
R6	B	C	6M
R7	B	C	6M
R12	B	C	12K
R13	B	C	12K
R14	B	C	11K
R15	B	C	11J
R16	B	C	11J
R20	B	C	7L
R21	B	C	7K
R22	B	C	5M
R23	B	C	6L
R24	B	C	6L
R25	B	C	5L
R26	B	C	5L
R27	B	C	5L
R28	B	C	3K
R29	B	C	4L
R30	B	C	4K
R31	B	C	3K
R32	B	C	4L
R33	B	C	3K
R34	B	C	6L
R35	B	C	6L
R36	B	C	7L
R37	B	C	6L
R38	B	C	6L
R39	B	C	6M
R40	B	C	5O
R41	B	C	6O
R42	B	C	4O
R43	B	C	6O
R44	B	C	6N
R45	B	C	6N
R46	B	C	7N
R47	B	C	6N
R50	B	C	9I
R51	B	C	10I
R52	B	C	9J
R53	B	C	10J
R54	B	C	10J
R55	B	C	11J
R56	B	C	9I
R57	B	C	9I
R58	B	C	9J
R59	B	C	9J
R60	B	C	9M
R61	B	C	9M
R62	B	C	9I
R63	B	C	9I
R64	B	C	8J
R65	B	C	8I
R66	B	C	8I
R67	B	C	8I
R68	B	C	6N
R69	B	C	6N
R70	B	C	9M
R71	B	C	9M
R72	B	C	8M
R73	B	C	9M
R74	B	C	9N
R75	B	C	9M
R76	B	C	10L
R77	B	C	7N
R78	B	C	7N
R79	B	C	8N
R80	B	C	8M
R81	B	C	9M
R82	B	C	9F
R83	B	C	8F
R84	B	C	9K
R85	B	C	9L
R101	B	C	6I
R102	A	D	6I
R103	B	C	5I
R104	B	C	5I
R105	B	C	5I
R106	B	C	5I
R107	B	C	4H
R108	B	C	5I
R109	B	C	5I
R110	B	C	4I
R111	B	C	7J
R112	B	C	6J
R113	B	C	6J
R114	B	C	6J
R115	B	C	6J
R116	B	C	5J
R117	B	C	5J
R118	B	C	5J
R119	B	C	4I
R120	B	C	4J
R121	B	C	6H
R122	B	C	6H
R123	B	C	6I
R124	B	C	4J
R125	B	C	4J
R126	B	C	4M
R127	B	C	4M
R128	B	C	3H
R129	B	C	3H
R130	B	C	2I
R131	B	C	2I
R132	B	C	3I
R133	B	C	2I
R134	B	C	3J
R135	B	C	2J
R136	B	C	2K
R137	B	C	4J
R138	B	C	4J
R139	B	C	3J
R140	B	C	3J
R141	B	C	3J
R142	B	C	3J
R201	A	D	14L
R202	B	C	18B
R203	B	C	20B
R204	A	D	17A
R205	A	D	17A
R206	B	C	20N
R207	B	C	20N
R208	B	C	21M
R209	B	C	21M
R210	B	C	20N
R211	B	C	20N
R212	B	C	21N
R213	B	C	21N
R214	B	C	21M
R215	B	C	21N
R216	B	C	21F
R217	B	C	22G
R218	B	C	22F
R219	B	C	22F
R220	B	C	21E
R221	B	C	22E
R222	B	C	21C
R223	B	C	21I
R224	B	C	21G
R225	B	C	22G
R226	B	C	20H
R227	B	C	21N
R228	B	C	21N
R229	B	C	20N
R230	B	C	19C
R231	B	C	19G
R232	B	C	20G
R233	B	C	18H
R235	B	C	22N
R236	B	C	20B
R237	B	C	19C
R238	B	C	22C
R239	B	C	18B
R240	B	C	19C
R243	B	C	20C
R245	B	C	20C
R246	B	C	20C
R248	B	C	20D
R249	B	C	21D
R250	B	C	21C
R252	B	C	21B
R253	B	C	17G
R254	B	C	18F
R255	B	C	17C
R256	B	C	13N
R257	B	C	13N
R258	B	C	17F
R260	B	C	18G
R261	B	C	18G
R262	B	C	18G
R263	B	C	18G
R264	B	C	18F
R265	B	C	17G
R266	B	C	21M
R267	B	C	21M
R268	B	C	20L
R269	B	C	20M
R270	B	C	21M
R271	B	C	22M
R272	B	C	21M
R273	B	C	21L
R274	A	D	14N
R275	B	C	14N
R276	B	C	14N
R277	B	C	14O
R278	B	C	14O
R279	B	C	13O
R280	B	C	14N
R281	B	C	17O
R282	B	C	17O
R283	B	C	16O
R284	B	C	21C
R285	B	C	17G
R286	B	C	17C
R287	B	C	18C
R288	B	C	18P
R289	B	C	18H
R290	B	C	18C
R291	B	C	18C
R292	B	C	17F
R295	B	C	21L
R296	B	C	21K
R297	B	C	21K
R298	B	C	18K
R301	B	C	15M
R302	B	C	16N
R303	B	C	16L
R304	B	C	17N
R305	B	C	17N
R306	B	C	17M
R307	B	C	17N
R308	B	C	17M
R309	B	C	17N
R310	B	C	17M
R311	B	C	17M
R312	B	C	18M
R314	B	C	15K
R315	B	C	15L
R316	B	C	17K
R317	B	C	15K
R318	B	C	16L
R320	B	C	16K
R321	B	C	17L
R322	B	C	17K
R323	B	C	18L
R324	B	C	19L
R326	B	C	19L
R327	B	C	19M
R328	B	C	19L
R329	B	C	18L
R330	B	C	18L
R331	B	C	18M
R332	B	C	18M
R333	B	C	19M
R334	B	C	17M
R335	B	C	17L
R336	B	C	19M
R337	B	C	19M
R339	B	C	17L
R340	B	C	16M
R341	B	C	16L
R342	B	C	16M
R351	B	C	4A
R352	B	C	3A
R353	B	C	4A
R354	B	C	4A
R355	B	C	5A
R356	B	C	3A
R401	B	C	13I
R402	B	C	13I
R403	B	C	13I
R404	B	C	14I
R405	B	C	13I
R406	B	C	13I
R407	B	C	15I
R408	B	C	19D
R409	B	C	15I
R410	B	C	13G
R411	B	C	13G
R412	B	C	13G
R413	B	C	11F
R414	B	C	13G
R415	B	C	13G
R416	B	C	13G
R417	B	C	14G
R418	B	C	14G
R419	B	C	14G
R420	B	C	13G
R421	B	C	14G
R422	B	C	14G
R423	B	C	14G
R424	B	C	14G
R425	B	C	14F
R426	B	C	14G
R427	A	D	15F
R428	B	C	14F
R429	B	C	14G
R430	B	C	15G
R431	B	C	15G
R432	B	C	11F
R434	B	C	15G
R435	A	D	14F
R436	B	C	15G
R438	B	C	15G
R445	B	C	13H
R448	B	C	14H
R449	B	C	10E
R451	B	C	12G
R452	B	C	12G
R453	B	C	13F
R454	B	C	12G
R455	B	C	13F
R456	B	C	13F
R457	A	D	12G
R485	B	C	14G
R601	B	C	5B
R602	B	C	5B
R603	B	C	5B
R604	B	C	6B
R605	B	C	7D
R606	B	C	8D
R607	B	C	8D
R608	B	C	7D
R609	B	C	7D
R610	B	C	7D
R611	B	C	7D
R612	B	C	7D
R613	B	C	7D
R614	B	C	7E
R615	B	C	6D
R616	B	C	7D
R617	B	C	6C
R618	B	C	7C
R619	B	C	7C
R620	B	C	8E
R621	B	C	7E
R622	B	C	7E
R623	B	C	7E
R624	B	C	7E
R625	B	C	6E
R626	B	C	6E
R627	B	C	7E
R628	B	C	6E
R629	B	C	6F
R630	B	C	6F
R631	B	C	7F
R632	B	C	7F
R633	B	C	6F
R634	B	C	6F
R635	B	C	5F
R636	B	C	5F
R637	B	C	5F
R638	B	C	5F
R639	B	C	5F
R640	B	C	5F
R641	B	C	5F
R642	B	C	5F
R643	B	C	4F
R644	B	C	4F
R645	B	C	4F
R646	B	C	4F
R647	B	C	4F
R648	B	C	4F
R649	B	C	4E
R650	B	C	4E
R651	B	C	4E
R652	B	C	4E
R653	B	C	4E
R654	B	C	4E
R655	B	C	4E
R656	B	C	4E
R657	B	C	3D
R658	B	C	4D
R659	B	C	4D
R660	B	C	3D
R661	B	C	4C
R662	B	C	3D
R663	B	C	3C
R664	B	C	3C
R665	B	C	3C
R666	B	C	4C
R667	B	C	4C
R668	B	C	4C
R669	B	C	3C
R670	B	C	3C
R671	B	C	4C
R672	B	C	3F
R673	B	C	3B
R674	B	C	2C
R675	B	C	1D
R676	B	C	1D
R677	B	C	1D
R678	B	C	8B
R679	B	C	2E
R680	B	C	2E
R681	B	C	8C
R682	B	C	1F
R683	B	C	4C
R684	B	C	5B
R685	B	C	5B
R686	B	C	14C
R687	B	C	8C
R688	B	C	7G
R689	B	C	6F
R690	B	C	1F
R691	B	C	8B
R692	B	C	8B
R693	B	C	9B
R694	B	C	7B
R695	B	C	7A
R696	B	C	9C
R697	B	C	2A
R698	B	C	4G
R699	B	C	4G
R701	B	C	16D
R702	B	C	15D
R703	B	C	15D
R704	B	C	15D
R705	B	C	15D
R706	B	C	14E
R707	B	C	15E
R708	B	C	15E
R709	B	C	16D
R710	B	C	16C
R711	B	C	14E
R712	B	C	16C
R713	B	C	16C
R714	B	C	14E
R715	B	C	16C
R716	B	C	16D
R717	B	C	16D
R718	B	C	15D
R719	B	C	15D
R720	B	C	16D
R721	B	C	16D
R722	B	C	16D
R723	B	C	16D
R724	B	C	15E
R725	B	C	15E
R726	B	C	17D
R727	B	C	17D
R728	B	C	16D
TEST POINT			
TP	A	D	18G
TP33	A	D	2H
TP34	A	D	2I
TP204	A	D	17H
TP212	A	D	18I
TP223	A	D	20F
TP226	A	D	19F
TP244	A	D	18B
TP251	A	D	20F
TP252	A	D	19F
TP253	A	D	20I
TP254	A	D	20H
TP255	A	D	19D
TP401	A	D	18F
TP411	A	D	18C
TP424	A	D	13J
OTHERS			
X601	A	D	6
CF601	A	D	6C
CF701	A	D	15D
JA1	A	D	2P
JA2	A	D	3P
JA3	A	D	4P
JA4	A	D	5P
JP1	A	D	6N
JP2	A	D	4N
K1	A	D	3N
K2	A	D	6N
T101	A	D	2I
T102	A	D	2J
TH601	A	D	1G

4.12 MAIN CIRCUIT BOARD


MAIN PWB ASS'Y
MAIN UNIT ASS'Y
AUDIO IN
AUDIO OUT
AUDIO
VIDEO
SERVO
SYSCON
VIDEO CPU
IC601
F.ERASE
A.ERASE
CLK ADJ
CAR/DEV
C.SYNC
W/D CLIP
CTL.P
SEPA'D Y
SECAM DET
C.GAIN
REC
D.FF
V OUT
C OUT
Y OUT
PB10968 -01-01 MAIN PWB
UL-MARK
A
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O

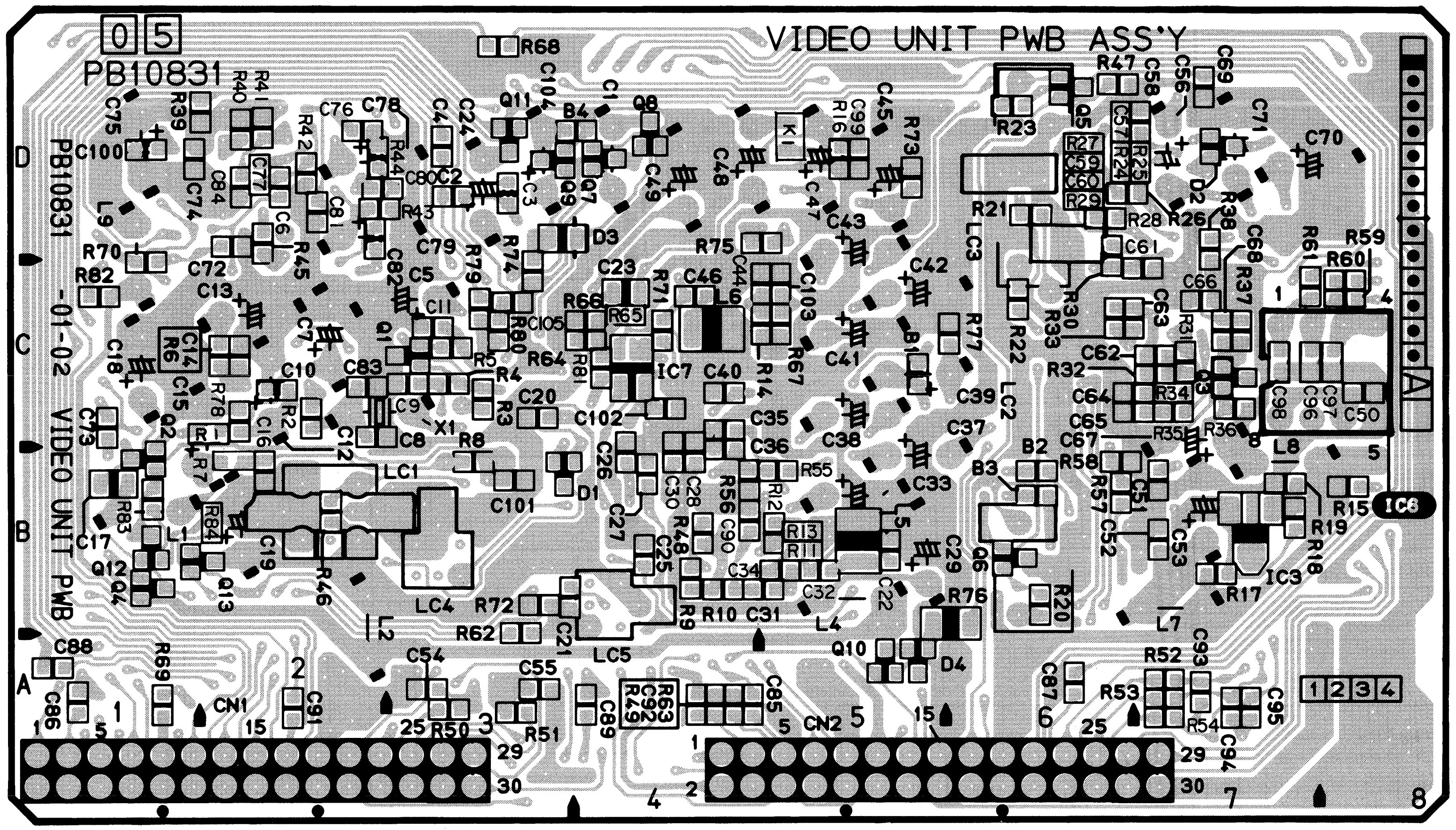
4.13 VIDEO UNIT SCHEMATIC DIAGRAM


TO VIDEO CN202 (Page4-20)
CN1
LPF'D Y
N.C
BPF'D C
CK DET
+6dB V
DELAY'D Y
+6dB C
SUPER IMPOSE
+6dB Y
Y TO CONV.
TRICK
CONV.'D C
COLOR KILLER
C TO CONV.
SEL'D C
P BURST DET
MESECAM DET COL
fsc
C GND
C GND
COL ROT
DOC PULSE
EX VIDEO
SSB CLK
SEL'D Y/V
SSB DATA
C.SYNC
D.SYNC
N.C
APT/ROT
TO VIDEO CN203 (Page4-20)
CN2
PB COL
FM VCC
REC FM
REC COL
PB FM
SKEW DET
DEEMP E
W/D CHECK
FM GND
FM GND
DEEMP C
C TO SEP
S VHS(H)
Y/V TO SEPA
Y GND
Y GND
SUB EMP CHECK
SEPA'D Y1
SW5V
SW5V
SEPA'D Y2/COMB'D C
SEPA'D C
V PULSE
EVR DATA
EVR CLK
EVR LD
M CE
M CLK
M DATA
AL5V
EVR DATA
EVR CLK
EVR LD
Y TO SUB-EMP
DL'D Y
Y TO CONV.
SEL'D Y/V
EX VIDEO
Y/V TO SEPA
SEPA'D Y1
C.SYNC
APT
V OUT
BAND GAP
Y OUT
LPF'D Y
SUPER IMP
BPF'D C
C OUT
SEPA'D Y2/COMB'D C
SEPA'D C
C TO SEP
IC1 JCP0054
IIL LOGIC
Ver 10.0
IC6 CAT35C104P-051
Q1 2SA1576(QRS)
Q2 DTC144WU
Q4 DTA144EU
Q7 DTA144EU
Q8 DTC144WU
Q9 DTC144WU
Q11 DTC144WU
Q12 DTC144WU
Q13 2SC4081(QRS)
D3 1SS355
X1 PEVB0550
LC1 PELN0938
LC4 PELN0940
LC5 PELN0940
IC7 TC4S81F
D1 DAP202U
SUB-EMPH LEV ADJ
W/D CLIP ADJ
DEVIATION ADJ
CARRIER ADJ
IC3 NJM431U
IC2 M62353GP
P.BURST ADJ
Y LEV ADJ
D2 DAN202U
IC4 VC2076MP
LC2 PELN0945
Q5 2SC4081(QRS)
Q6 2SA1576(QRS)
IC5 HA118092FP
COMP(L)
FM VCC
PB FM
SKEW PULSE
DOC PULSE
WHITE/DARK CLIP
BPF'D C OUT
S DET
DEEMP EMITTER
DEEMP COLLECTOR
fsc
PB C TO PILOT
SW5V
REC FM
PILOT DET
05 VIDEO UNIT
A
B
C
D
E
F
G
H
1
2
3
4
5

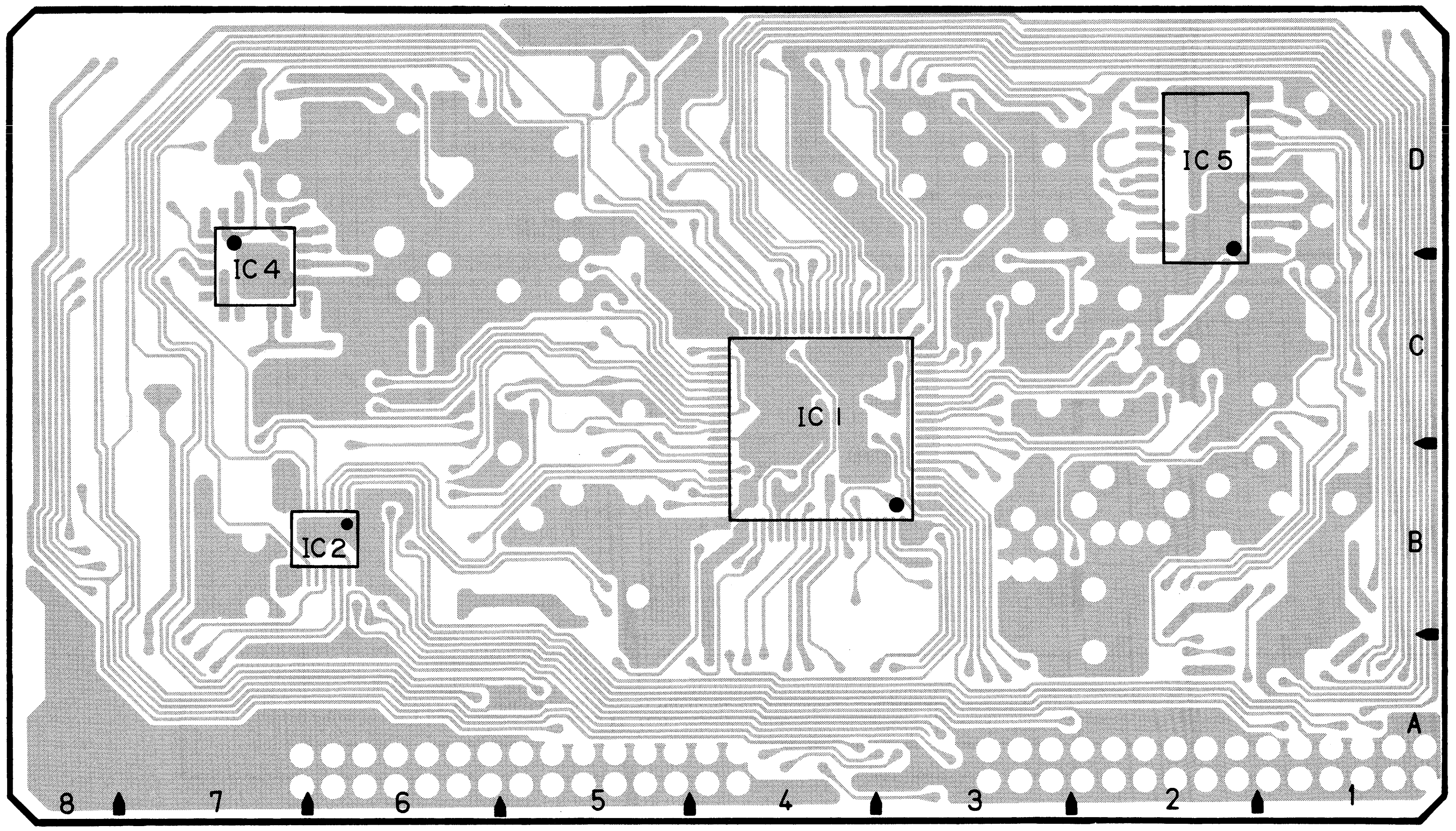
NOTE: Mark(*)is not used.

4.14 VIDEO UNIT CIRCUIT BOARD

—FOIL SIDE (B)—



—CONPONENT SIDE (A)—



<VIDEO UNIT PWB>

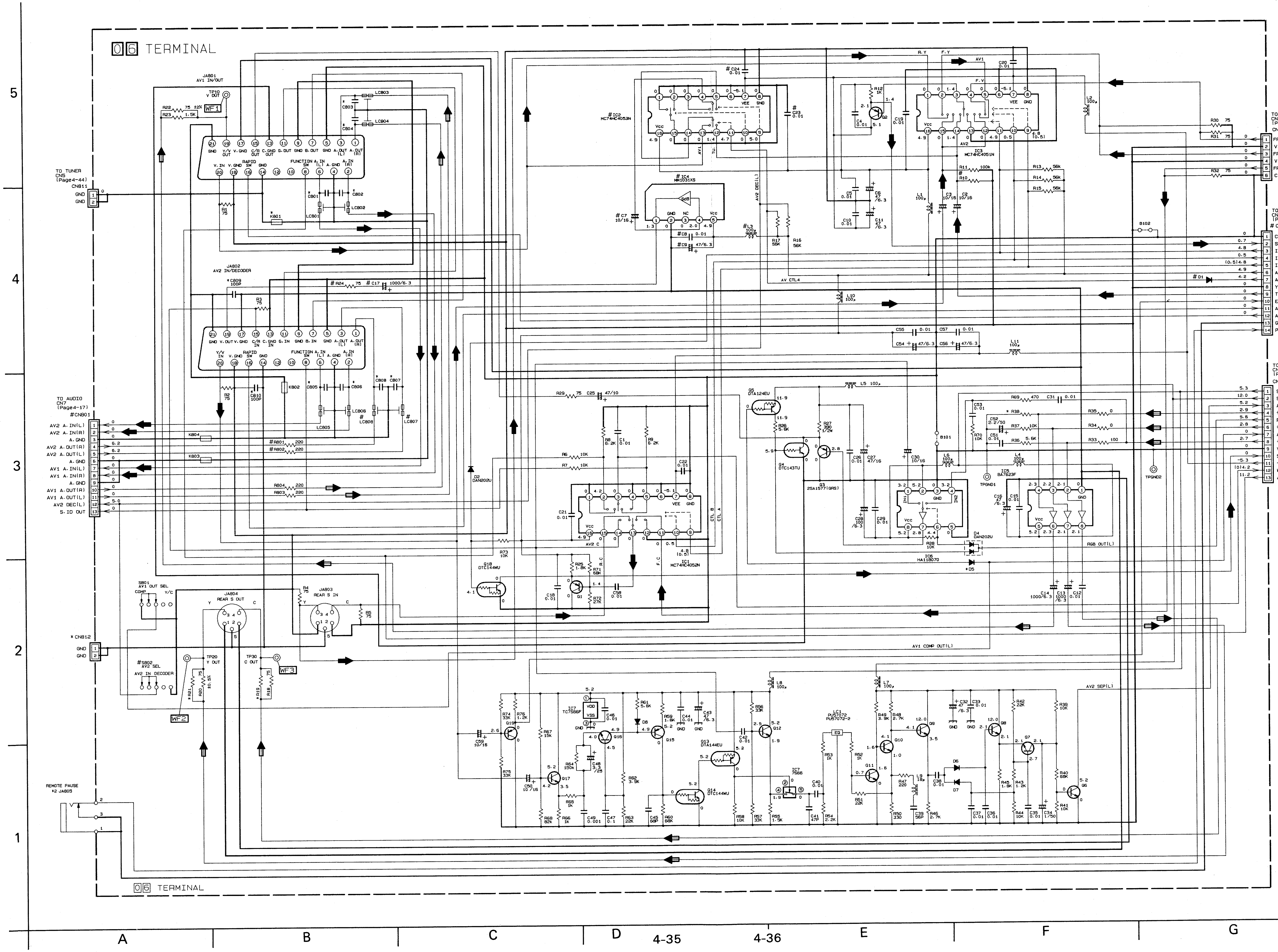
MAIN COMPONENT PARTS LOCATION GUIDE

REF.No.	LOCATION
IC	
IC1	A-4C
IC2	A-7B
IC3	B-7B
IC4	A-7D
IC5	A-2D
IC6	B-8B
IC7	B-4C
TRANSISTOR	
Q1	B-3C
Q2	B-1C
Q4	B-1B
Q5	B-6D
Q6	B-6B
Q7	B-4D
Q8	B-4D
Q9	B-3D
Q11	B-3D
Q12	B-1B
Q13	B-2B
DIODE	
D1	B-3B
D2	B-7D
D3	B-4D
CONNECTOR	
CN1	B-2A
CN2	B-5A

LEADLESS COMPONENT PARTS LOCATION GUIDE

REF.No.	LOCATION
IC	
IC1	A-4C
IC2	A-7B
IC3	B-7B
IC4	A-7D
IC5	A-2D
IC6	B-8B
IC7	B-4C
TRANSISTOR	
Q1	B-3C
Q2	B-1C
Q3	B-7C
Q4	B-1B
Q5	B-6D
Q6	B-6B
Q7	B-4D
Q8	B-4D
Q9	B-3D
Q10	B-5A
Q11	B-3D
Q12	B-1B
Q13	B-2B
DIODE	
D1	B-3B
D2	B-7D
D3	B-4D
D4	B-5A
RESISTOR	
R1	B-2C
R2	B-2C
R3	B-3C
R4	B-3C
R5	B-3C
R6	B-2C
R7	B-2B
R8	B-3B
R9	B-4B
R10	B-4B
R11	B-5B
R12	B-5B
R13	B-5B
R14	B-5C
R15	B-8B
R16	B-5D
R17	B-7A
R18	B-7A
R19	B-7A
R20	B-6B
R21	B-6D
R22	B-6C
R23	B-6D
R24	B-6D
R25	B-7D
R26	B-7D
R27	B-6D
R28	B-6D
R29	B-6D
R30	B-6C
R31	B-7C
R32	B-7C
R33	B-6C
R34	B-7C
R35	B-7C
R36	B-7C
R37	B-7C
R38	B-7D
R39	B-1D
R40	B-2D
R41	B-2D
R42	B-2D
R43	B-2D
R44	B-2D
R45	B-2D
R46	B-2B
R47	B-6D
R48	B-4B
R49	B-4A
R50	B-3A
R51	B-3A
R52	B-7A
R53	B-7A
R54	B-7A
R55	B-5B
R56	B-4B
R57	B-6B
R58	B-6B
R59	B-8C
R60	B-8C
R61	B-7C
R62	B-3B
R63	B-4A
R64	B-4C
R65	B-4C
R66	B-4C
R67	B-5C
R68	B-3D
R69	B-1A
R70	B-1D
R71	B-4C
R72	B-3B
R73	B-5D
R74	B-3C
R75	B-5D
R76	B-6B
R77	B-6C
R78	B-2C
R79	B-3C
R80	B-3C
R81	B-4C
R82	B-1C
R83	B-2A
R84	B-2B
CAPACITOR	
C2	B-3D
C3	B-3D
C4	B-3D
C6	B-2D
C8	B-3C
C9	B-3C
C10	B-2C
C11	B-3C
C14	B-2C
C16	B-2B
C17	B-1B
C20	B-3C
C21	B-3B
C22	B-5B
C23	B-4C
C25	B-4B
C26	B-4B
C27	B-4B
C28	B-4B
C30	B-4B
C31	B-5B
C32	B-5B
C34	B-5B
C35	B-4C
C36	B-4C
C40	B-4C
C44	B-5C
C46	B-4C
C50	B-8C
C51	B-7B
C52	B-7A
C54	B-3A
C55	B-3A
C57	B-6D
C58	B-7D
C59	B-6D
C60	B-6D
C61	B-7C
C62	B-7C
C63	B-7C
C64	B-6C
C65	B-6C
C66	B-7C
C68	B-7C
C69	B-7D
C72	B-2D
C73	B-1C
C74	B-1D
C76	B-2D
C77	B-2D
C80	B-2D
C81	B-2D
C82	B-2D
C83	B-2C
C84	B-2D
C85	B-4A
C86	B-1A
C87	B-6A
C88	B-1A
C89	B-4A
C90	B-4B
C91	B-2A
C92	B-4A
C93	B-7A
C94	B-7A
C95	B-7A
C96	B-7C
C97	B-8C
C98	B-7C
C99	B-5D
C100	B-1D
C101	B-3B
C102	B-4C
C103	B-5C
C105	B-3C

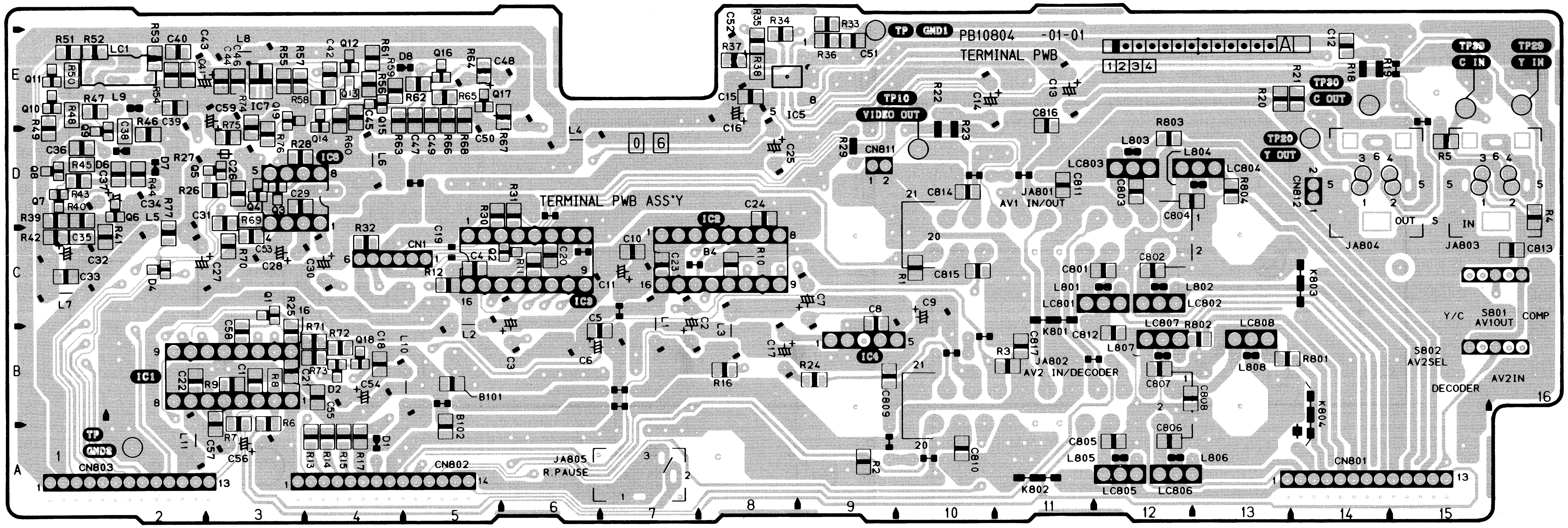
4.15 TERMINAL SCHEMATIC DIAGRAM


06 TERMINAL
JA801 AV1 IN/OUT
JA802 AV2 IN/DECODER
JA803 REAR S IN
JA804 REAR S OUT
TO TUNER CN5 (Page4-44) CN811
GND
GND
TO AUDIO CN7 (Page4-17) #CN801
AV2 A.IN(L)
AV2 A.IN(R)
A.GND
AV2 A.OUT(R)
AV2 A.OUT(L)
A.GND
AV1 A.IN(L)
AV1 A.IN(R)
A.GND
AV1 A.OUT(R)
AV1 A.OUT(L)
AV2 DEC(L)
S.ID OUT
*CN812
REMOTE PAUSE *2 JA805
S801 AV1 OUT SEL
#S802 AV2 SEL
TO SW/JACK CN104 (Page4-54) CN1
FRONT V
V.GND(IN)
FRONT S Y
V.GND(IN)
FRONT S C
C.GND(IN)
TO VIDEO CN207 (Page4-19) # CN802
C.GND(IN)
SEL'D Y/V
INPUT CTL C
INPUT CTL B
INPUT CTL A
AL 5V
AV CTL4
Y/V GND(IN)
TUNER VIDEO
EX VIDEO
AV2 RAPID SW
AV1 RAPID SW
GND(C)*
PAUSE CTL*
TO VIDEO CN206 (Page4-19) CN803
SW 5V
SW 12V
AV2 SEP(L)
+6dB V
RGB OUT(L)
+6dB Y
AV1 COMP OUT(L)
+6dB C
V.GND(OUT)
SEL'D C
-5V
W.A DET
AV1 FUNC SW
#IC2 MC74HC4053N
IC3 MC74HC4051N
#IC4 MM1031XS
IC1 MC74HC4052N
IC5 BA7623F
IC6 HA118070
IC7 TC7S66F
IC7 7S66
LC1 PU57072 PU57072-2
TP10 V OUT
TP20 Y OUT
TP30 C OUT
WF1
WF2
WF3
AV1 COMP OUT(L)
AV2 SEP(L)
RGB OUT(L)
1
2
3
4
5
A
B
C
D
E
F
G
H

NOTES :
1. Mark(*)is not used.
2. Unless otherwise specified.
All PNP type transistors are 2SA1576(QRS).
All NPN type transistors are 2SC4081(QRS).
3. COMPARISON CHART OF MODELS & MARKS(#)

REF.NO	MODELS	
	HR-S9200EG	RH-S9200EH
IC2, IC4	USED	OPEN
D1	USED	OPEN
R10	100K	10K
R24	USED	OPEN
R801, R802	USED	OPEN
C7~C9	USED	OPEN
C17	USED	OPEN
C23, C24	USED	OPEN
L3	USED	OPEN
LC807	USED	OPEN
LC808	USED	OPEN
S802	USED	OPEN
CN801	1~13	1~11
CN802	1-12	1-10

4.16 TERMINAL CIRCUIT BOARD


PB10804 -01-01
TERMINAL PWB
TERMINAL PWB ASS'Y
TP GND1
TP GND2
TP10 VIDEO OUT
TP20 Y OUT
TP30 C OUT
TP29 C IN
TP39 Y IN
IC1
IC2
IC3
IC4
IC5
IC6
IC7
CN1
CN801
CN802
CN803
CN811
CN812
JA801 AV1 IN/OUT
JA802 AV2 IN/DECODER
JA803
JA804
JA805 R.PAUSE
OUT
IN
Y/C
S801 AV1OUT
COMP
S802 AV2SEL
DECODER
AV2IN
K801
K802
K803
K804
LC1
LC801
LC802
LC803
LC804
LC805
LC806
LC807
LC808
E
D
C
B
A
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

COMPONENT PARTS LOCATION GUIDE

REF.NO.	LOCATION		
CAPACITOR			
C1	B	C	3B
C2	A	D	7C
C3	A	D	6C
C4	B	C	5C
C5	B	C	7B
C6	A	D	7B
C7	A	D	9C
C8	B	C	9C
C9	A	D	10C
C10	B	C	7C
C11	A	D	7C
C12	B	C	14E
C13	A	D	11E
C14	A	D	10E
C15	B	C	8E
C16	A	D	8E
C17	A	D	8B
C18	B	C	4B
C19	A	D	5C
C20	B	C	6C
C21	B	C	3B
C22	B	C	2B
C23	B	C	7C
C24	B	C	8D
C25	A	D	8D
C26	B	C	3D
C27	A	D	2C
C28	A	D	3C
C29	B	C	3D
C30	A	D	4C
C31	B	C	3D
C32	A	D	1C
C33	B	C	1C
C34	A	D	2D
C35	B	C	1C
C36	B	C	1D
C37	B	C	2D
C38	B	C	2D
C39	B	C	2E
C40	B	C	2E
C41	B	C	2E
C42	B	C	4E
C43	A	D	3E
C44	B	C	3E
C45	B	C	4E
C46	B	C	3E
C47	B	C	5E
C48	A	D	5E
C49	B	C	5E
C50	A	D	6E
C51	B	C	9E
C52	A	D	8E
C53	B	C	3C
C54	A	D	4B
C55	B	C	4B
C56	A	D	3A
C57	B	C	3B
C58	B	C	3B
C59	A	D	2E
C801	B	C	12C
C802	B	C	12C
C803	B	C	12D
C804	B	C	13D
C805	B	C	12A
C806	B	C	12A
C807	B	C	12B
C808	B	C	12B
C809	B	C	9B
C810	B	C	10A
C811	B	C	11D
C812	B	C	12B
C813	B	C	16C
C814	B	C	10D
C815	B	C	10C
C816	B	C	11E
C817	B	C	11B
CONNECTOR			
CN1	A	D	5C
CN801	A	D	15A
CN802	A	D	5A
CN803	A	D	3A
CN811	A	D	9D
CN812	A	D	14D
DIODE			
D1	A	D	4A
D2	B	C	4B
D4	B	C	2C
D6	A	D	2D
D7	A	D	2D
D8	A	D	4E
IC			
IC1	A	D	3B
IC2	A	D	7C
IC3	A	D	5C
IC4	A	D	9B
IC5	B	C	8E
IC6	A	D	4D
IC7	B	C	3E
COIL			
L1	A	D	7B
L2	A	D	5C
L3	A	D	8B
L4	A	D	6D
L5	A	D	2C
L6	A	D	4D
L7	A	D	1C
L8	A	D	3E
L9	A	D	2E
L10	A	D	5B
L11	A	D	2A
L801	A	D	11C
L802	A	D	12C
L803	A	D	12D
L804	A	D	12D
L805	A	D	12A
L806	A	D	12A
L807	A	D	12B
L808	A	D	13B
TRANSISTOR			
Q1	B	C	3C
Q2	B	C	6C
Q3	B	C	3D
Q4	B	C	3D
Q5	B	C	3D
Q6	B	C	2D
Q7	B	C	1D
Q8	B	C	1D
Q9	B	C	1D
Q10	B	C	1E
Q11	B	C	1E
Q12	B	C	4E
Q13	B	C	4E
Q14	B	C	4E
Q15	B	C	4E
Q16	B	C	5E
Q17	B	C	5E
Q18	B	C	4B
Q19	B	C	3E
RESISTOR			
R1	B	C	10C
R2	B	C	9A
R3	B	C	11B
R4	B	C	16D
R5	B	C	15D
R6	B	C	3B
R7	B	C	3B
R8	B	C	3B
R9	B	C	3B
R10	B	C	8C
R11	B	C	6C
R12	B	C	5C
R13	B	C	4A
R14	B	C	4A
R15	B	C	4A
R16	B	C	8B
R17	B	C	4A
R18	A	D	14E
R19	A	D	14E
R20	B	C	13E
R21	B	C	14E
R22	A	D	10D
R23	A	D	10D
R24	B	C	9B
R25	B	C	3B
R26	B	C	3D
R27	A	D	3D
R28	B	C	3D
R29	A	D	9D
R30	B	C	5D
R31	B	C	6D
R32	B	C	4C
R33	B	C	9F
R34	B	C	8E
R35	B	C	8E
R36	B	C	9E
R37	B	C	8E
R38	B	C	8E
R39	B	C	1D
R40	B	C	1D
R41	B	C	2C
R42	B	C	1C
R43	B	C	1D
R44	B	C	2D
R45	B	C	1D
R46	B	C	2D
R47	B	C	1E
R48	B	C	1E
R49	B	C	1E
R50	B	C	1E
R51	B	C	1E
R52	B	C	1E
R53	B	C	2E
R54	B	C	2E
R55	B	C	3E
R56	B	C	4E
R57	B	C	3E
R58	B	C	4E
R59	B	C	4E
R60	B	C	4E
R61	B	C	4E
R62	B	C	5E
R63	B	C	4E
R64	B	C	5E
R65	B	C	5E
R66	B	C	5E
R67	B	C	6E
R68	B	C	5E
R69	B	C	3D
R70	B	C	3C
R71	B	C	4B
R72	B	C	4B
R73	B	C	4B
R74	B	C	3E
R75	B	C	3D
R76	B	C	3D
R77	B	C	2C
R801	B	C	13B
R802	B	C	13B
R803	B	C	12D
R804	B	C	13D
TEST POINT			
TP	A	D	2A
TP	A	D	9E
TP10	A	D	10D
TP20	A	D	14D
TP29	A	D	16E
TP30	A	D	14E
TP39	A	D	15E
OTHERS			
S801	A	D	16C
S802	A	D	16B
JA801	A	D	11C
JA802	A	D	11B
JA803	A	D	16D
JA804	A	D	14D
JA805	A	D	7A
K801	A	D	11C
K802	A	D	11A
K803	A	D	14C
K804	A	D	14A
LC1	A	D	1E
LC801	A	D	11C
LC802	A	D	12C
LC803	A	D	12D
LC804	A	D	12D
LC805	A	D	12A
LC806	A	D	12A
LC807	A	D	12B
LC808	A	D	13B

REF. NO.	LOCATION		
	IC ◄		
IC101	B	C	6 A

Cateqory : IC

B : Foil side
(A : Component side)

C : Chip Component
(D : Discrete component)

Horizontal "A" zone

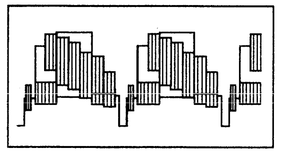
Vertical "6" zone

WAVEFORMS

— TERMINAL —

WF1

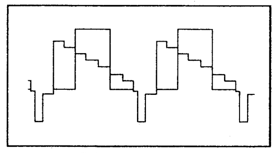
TP10
V OUT



REC/PB1.0Vp-p
50mV/20μsec/DIV

WF2

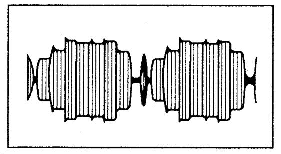
TP20
Y OUT



REC/PB2.0Vp-p
0.1V/20μsec/DIV

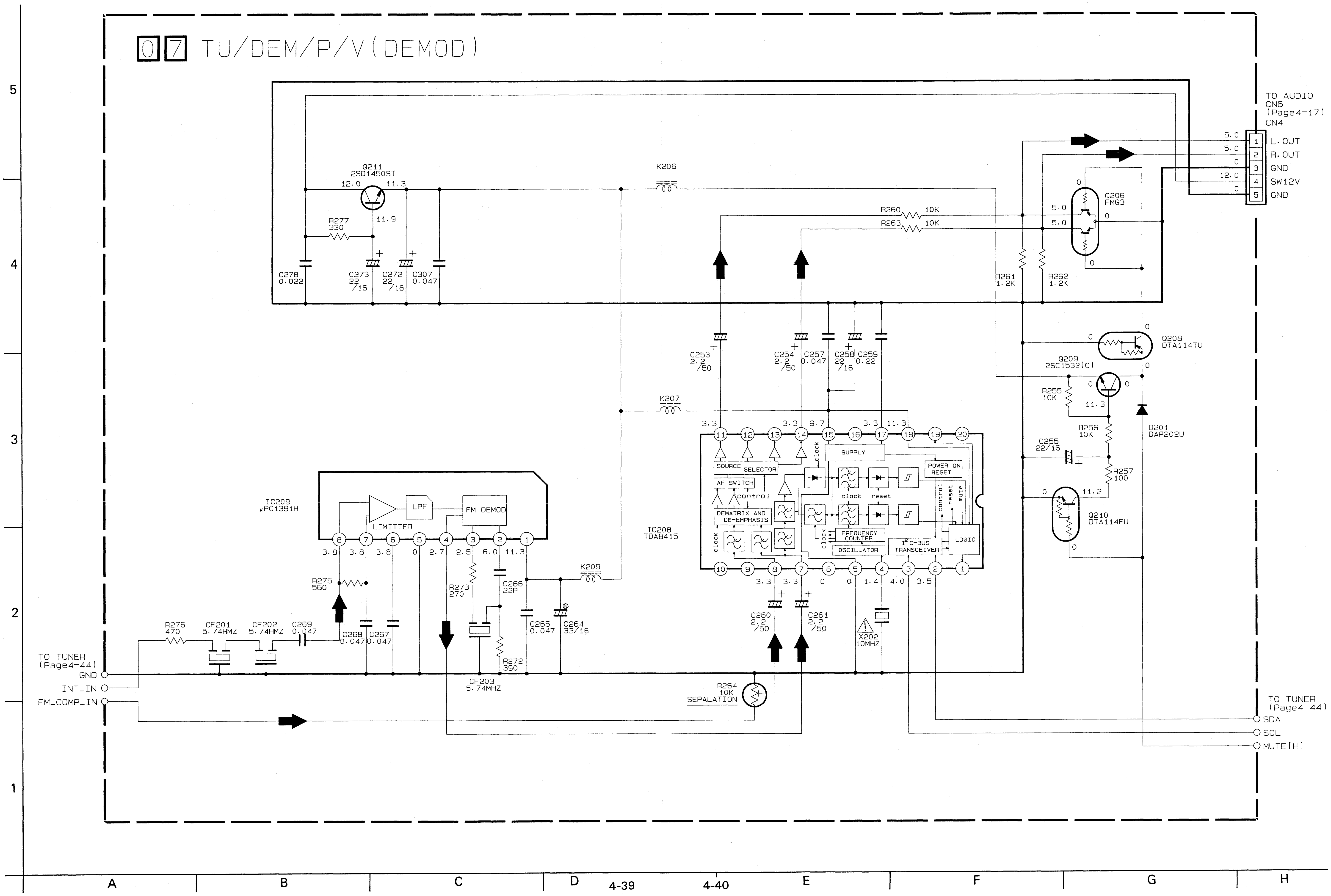
WF3

TP30
C OUT



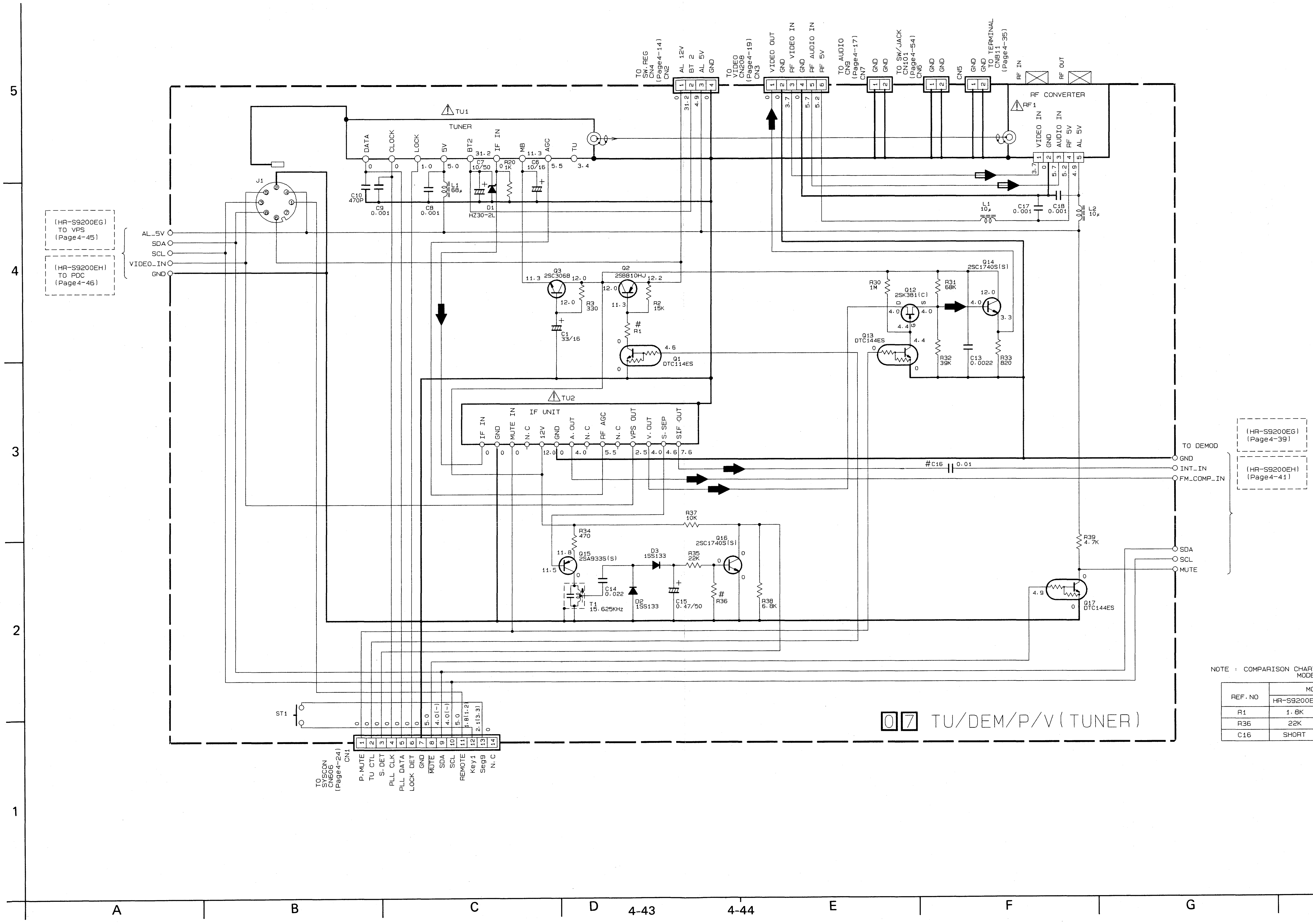
REC/PB1.7Vp-p
50mV/20μsec/DIV

4.17 DEMODULATOR SCHEMATIC DIAGRAM –for HR-S9200EG–



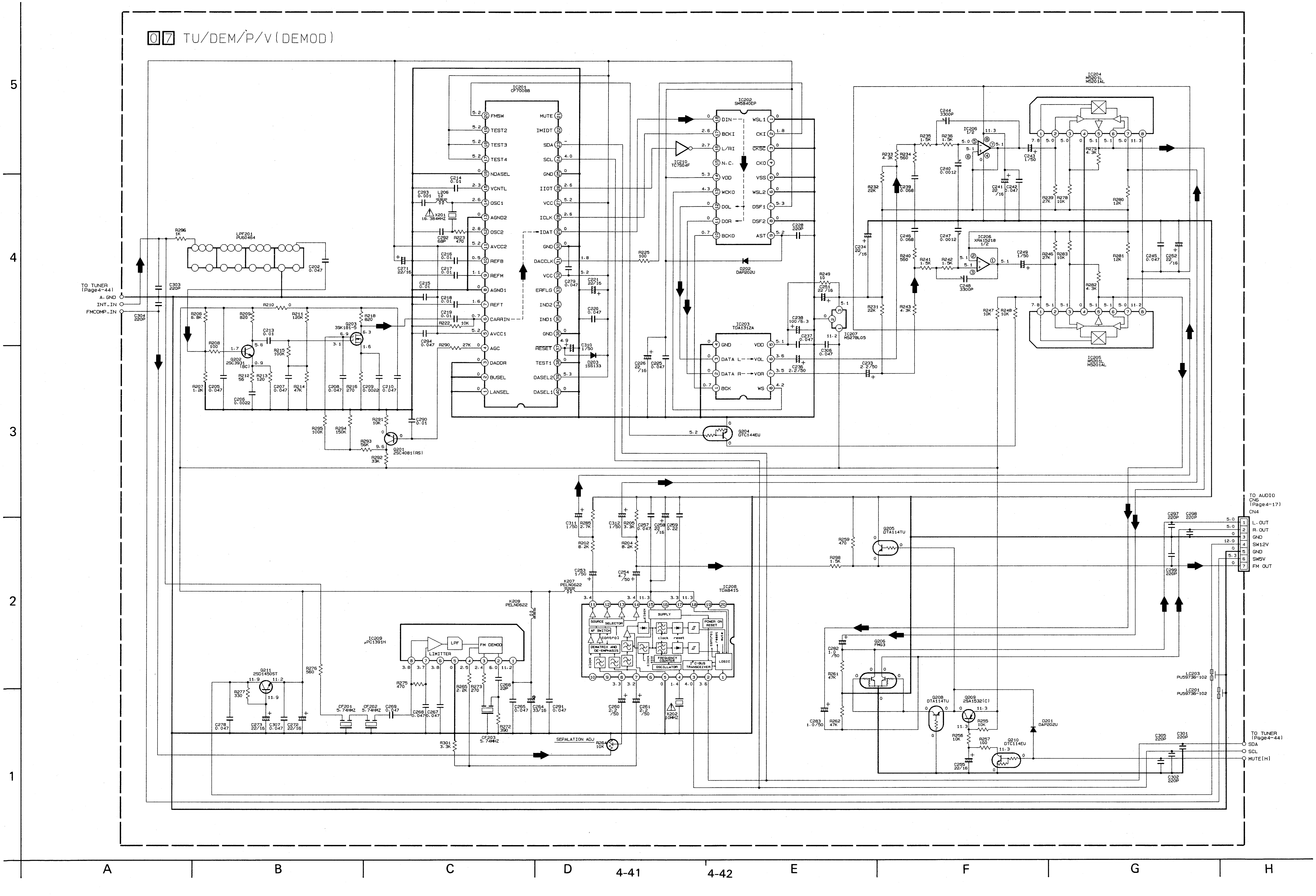
07 TU/DEM/P/V(DEMOD)
Q211
2SD1450ST
12.0
11.3
11.9
R277
330
C278
0.022
C273
22
/16
C272
22
/16
C307
0.047
K206
K207
K209
R260 10K
R263 10K
5.0
5.0
0
Q206
FMG3
R261
1.2K
R262
1.2K
TO AUDIO
CN6
(Page4-17)
CN4
1 L.OUT
2 R.OUT
3 GND
4 SW12V
5 GND
12.0
Q208
DTA114TU
Q209
2SC1532(C)
R255
10K
R256
10K
R257
100
11.3
11.2
C255
22/16
D201
DAP202U
Q210
DTA114EU
C253
2.2
/50
C254
2.2
/50
C257
0.047
C258
22
/16
C259
0.22
3.3
3.3
9.7
3.3
11.3
IC208
TDA8415
SUPPLY
SOURCE SELECTOR
AF SWITCH
control
clock
reset
mute
POWER ON RESET
DEMATRIX AND DE-EMPHASIS
FREQUENCY COUNTER
OSCILLATOR
I²C-BUS TRANSCEIVER
LOGIC
3.3
3.3
0
0
1.4
4.0
3.5
C260
2.2
/50
C261
2.2
/50
X202
10MHZ
R264
10K
SEPALATION
IC209
μPC1391H
LIMITTER
LPF
FM DEMOD
3.8
3.8
3.8
0
2.7
2.5
6.0
11.3
R275
560
R273
270
C266
22P
R272
390
C265
0.047
C264
33/16
R276
470
CF201
5.74HMZ
CF202
5.74HMZ
C269
0.047
C268
0.047
C267
0.047
CF203
5.74MHZ
TO TUNER
(Page4-44)
GND
INT_IN
FM_COMP_IN
TO TUNER
(Page4-44)
SDA
SCL
MUTE(H)
1
2
3
4
5
A
B
C
D
E
F
G
H

4.18 TUNER SCHEMATIC DIAGRAM

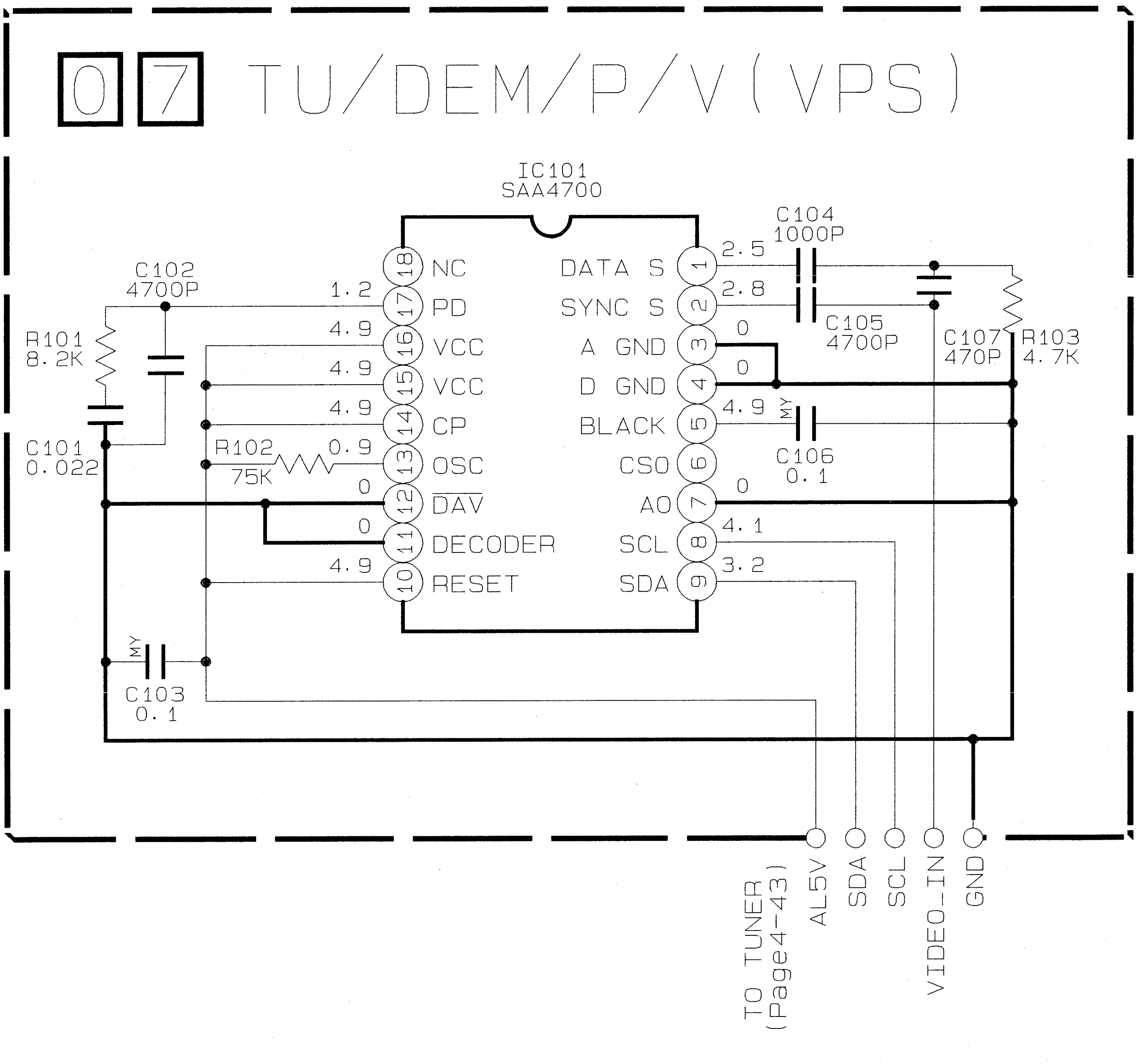

TU1
TUNER
DATA
CLOCK
LOCK
5V
BT2
IF IN
MB
AGC
TU
31.2
11.3
1.0
5.0
5.5
3.4
C7 10/50
R20 1K
C5 10/16
C10 470P
C9 0.001
C8 0.001
L1 68μ
D1 HZ30-2L
J1
(HR-S9200EG) TO VPS (Page4-45)
(HR-S9200EH) TO PDC (Page4-46)
AL_5V
SDA
SCL
VIDEO_IN
GND
TO SW.REG CN4 (Page4-14) CN2
AL 12V
BT 2
AL 5V
GND
TO VIDEO CN208 (Page4-19) CN3
VIDEO OUT
GND
RF VIDEO IN
GND
RF AUDIO IN
RF 5V
TO AUDIO CN9 (Page4-17) CN7
TO SW/JACK CN101 (Page4-54) CN5
TO TERMINAL CN811 (Page4-35)
CN5
RF IN
RF OUT
RF CONVERTER
RF1
VIDEO IN
GND
AUDIO IN
RF 5V
AL 5V
L1 10μ
C17 0.001
C18 0.001
L2 10μ
Q3 2SC3068
Q2 2SB810HJ
R3 330
R2 15K
C1 33/16
R1 #
Q1 DTC114ES
Q14 2SC1740S(S)
R30 1M
Q12 2SK381(C)
R31 68K
Q13 DTC144ES
R32 39K
C13 0.0022
R33 820
TU2
IF UNIT
IF IN
GND
MUTE IN
N.C
12V
GND
A.OUT
N.C
RF AGC
N.C
VPS OUT
V.OUT
S.SEP
SIF OUT
#C16 0.01
TO DEMOD
GND
INT_IN
FM_COMP_IN
(HR-S9200EG) (Page4-39)
(HR-S9200EH) (Page4-41)
SDA
SCL
MUTE
R37 10K
R34 470
Q15 2SA933S(S)
Q16 2SC1740S(S)
D3 1SS133
R35 22K
C14 0.022
T1 15.625KHz
D2 1SS133
C15 0.47/50
R36 #
R38 6.8K
R39 4.7K
Q17 DTC144ES
ST1
TO SYSCON CN606 (Page4-24) CN1
P.MUTE
TU CTL
S.DET
PLL CLK
PLL DATA
LOCK DET
GND
MUTE
SDA
SCL
REMOTE
Key1
Seg9
N.C
07 TU/DEM/P/V(TUNER)
A
B
C
D
E
F
G
H
1
2
3
4
5

NOTE : COMPARISON CHART OF MODELS & MARKS(#)

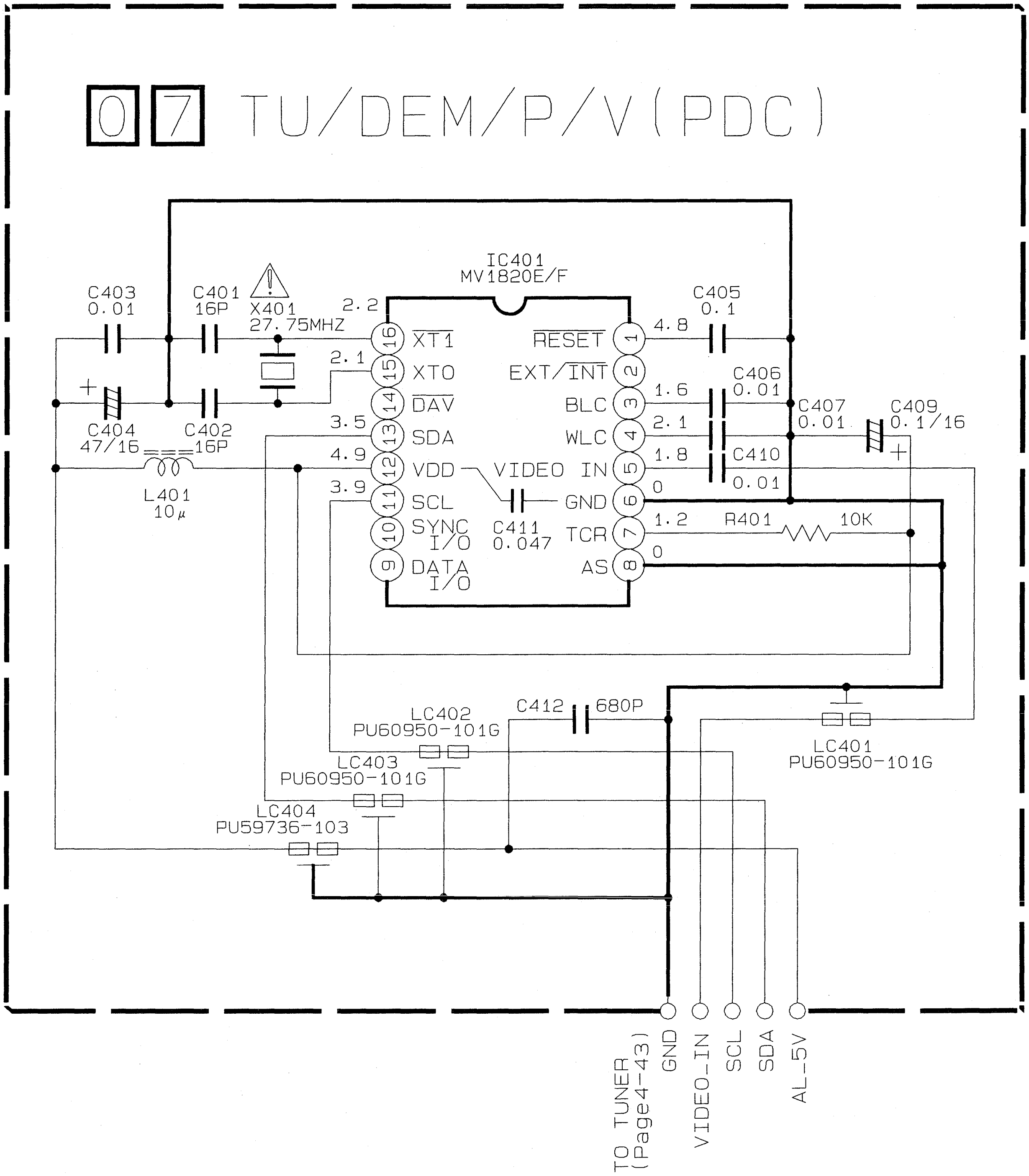
REF.NO	MODELS	
	HR-S9200EG	HR-S9200EH
R1	1.8K	1.5K
R36	22K	15K
C16	SHORT	USED


07 TU/DEM/P/V(DEMOD)
IC201 CF70088
FMSW
TEST2
TEST3
TEST4
NDASEL
VCNTL
OSC1
AGND2
OSC2
AVCC2
REFB
REFM
AGND1
REFT
CARRIN
AVCC1
AGC
DADDR
BUSEL
LANSEL
MUTE
IMIDT
SDA
SCL
GND
IIOT
VCC
ICLK
IDAT
DACCLK
ERFLG
IND2
IND1
RESET
TEST1
DASEL2
DASEL1
IC202 SM5840EP
DIN
BCKI
L/RI
N.C.
VDD
WCKO
DOL
DOR
BCKO
WSL1
CKI
CKSC
CKO
VSS
WSL2
DSF1
DSF2
AST
IC210 TC7S04F
IC203 TDA1312A
DATA L
DATA R
BCK
VOL
VOR
WS
IC204 M5201L M5201AL
IC205 M5201L M5201AL
IC206 XRA15218 1/2
IC207 M5278L05
IC208 TDA8415
SOURCE SELECTOR
AF SWITCH
control
DEMATRIX AND DE-EMPHASIS
SUPPLY
POWER ON RESET
clock
reset
FREQUENCY COUNTER
OSCILLATOR
I²C-BUS TRANSCEIVER
LOGIC
IC209 μPC1391H
LIMITTER
LPF
FM DEMOD
LPF201 PU60464
Q201 2SC4081(RS)
Q202 2SC3931(BC)
Q203 3SK181-5
Q204 DTC144EU
Q205 DTA114TU
Q206 FMG3
Q208 DTA114TU
Q209 2SA1532(C)
Q210 DTC114EU
Q211 2SD1450ST
D201 DAP202U
D202 DAP202U
D203 1SS133
X201 16.384MHZ
X202 10MHZ
CF201 5.74MHZ
CF202 5.74MHZ
CF203 5.74MHZ
K207 PELN0622
K209 PELN0622
LC201 PU59736-102
LC203 PU59736-102
L206 12
R264 10K
SEPALATION ADJ
TO TUNER (Page4-44)
A.GND
INT_IN
FMCOMP_IN
TO AUDIO CN6 (Page4-17)
CN4
L.OUT
R.OUT
GND
SW12V
GND
SW5V
FM OUT
TO TUNER (Page4-44)
SDA
SCL
MUTE(H)
1
2
3
4
5
A
B
C
D
E
F
G
H

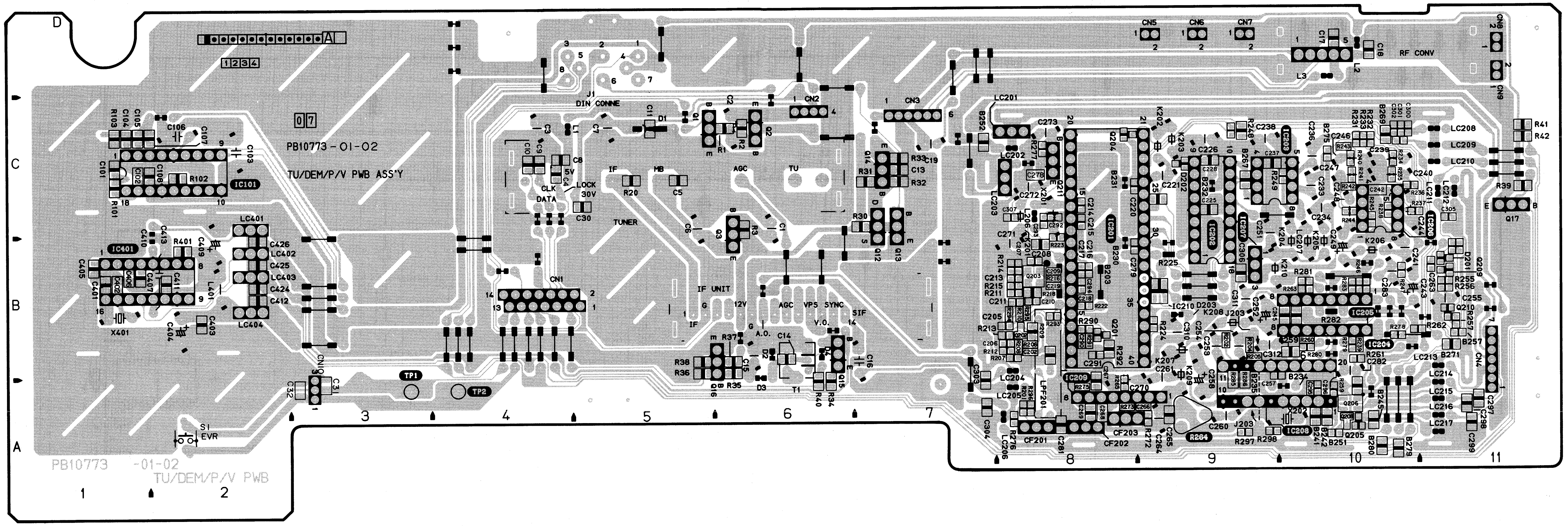
4.19 VPS SCHEMATIC DIAGRAM (for HR-S9200EG)


07 TU/DEM/P/V(VPS)
IC101
SAA4700
18 NC
17 PD
16 VCC
15 VCC
14 CP
13 OSC
12 DAV
11 DECODER
10 RESET
1 DATA S
2 SYNC S
3 A GND
4 D GND
5 BLACK
6 CSO
7 AO
8 SCL
9 SDA
1.2
4.9
4.9
4.9
0.9
0
0
4.9
2.5
2.8
0
0
4.9
0
4.1
3.2
C102
4700P
R101
8.2K
C101
0.022
R102
75K
C103
0.1
MY
C104
1000P
C105
4700P
C107
470P
R103
4.7K
C106
0.1
MY
TO TUNER
(Page4-43)
AL5V
SDA
SCL
VIDEO_IN
GND

4.20 PDC SCHEMATIC DIAGRAM (for HR-S9200EH)


07 TU/DEM/P/V(PDC)
IC401
MV1820E/F
C403
0.01
C401
16P
X401
27.75MHZ
C404
47/16
C402
16P
L401
10μ
C405
0.1
C406
0.01
C407
0.01
C409
0.1/16
C410
0.01
C411
0.047
R401
10K
C412
680P
XT1
XTO
DAV
SDA
VDD
SCL
SYNC I/O
DATA I/O
RESET
EXT/INT
BLC
WLC
VIDEO IN
GND
TCR
AS
2.2
2.1
3.5
4.9
3.9
4.8
1.6
2.1
1.8
0
1.2
0
LC401
PU60950-101G
LC402
PU60950-101G
LC403
PU60950-101G
LC404
PU59736-103
TO TUNER (Page4-43)
GND
VIDEO_IN
SCL
SDA
AL_5V

4.21 TUNER CURCUIT BOARD

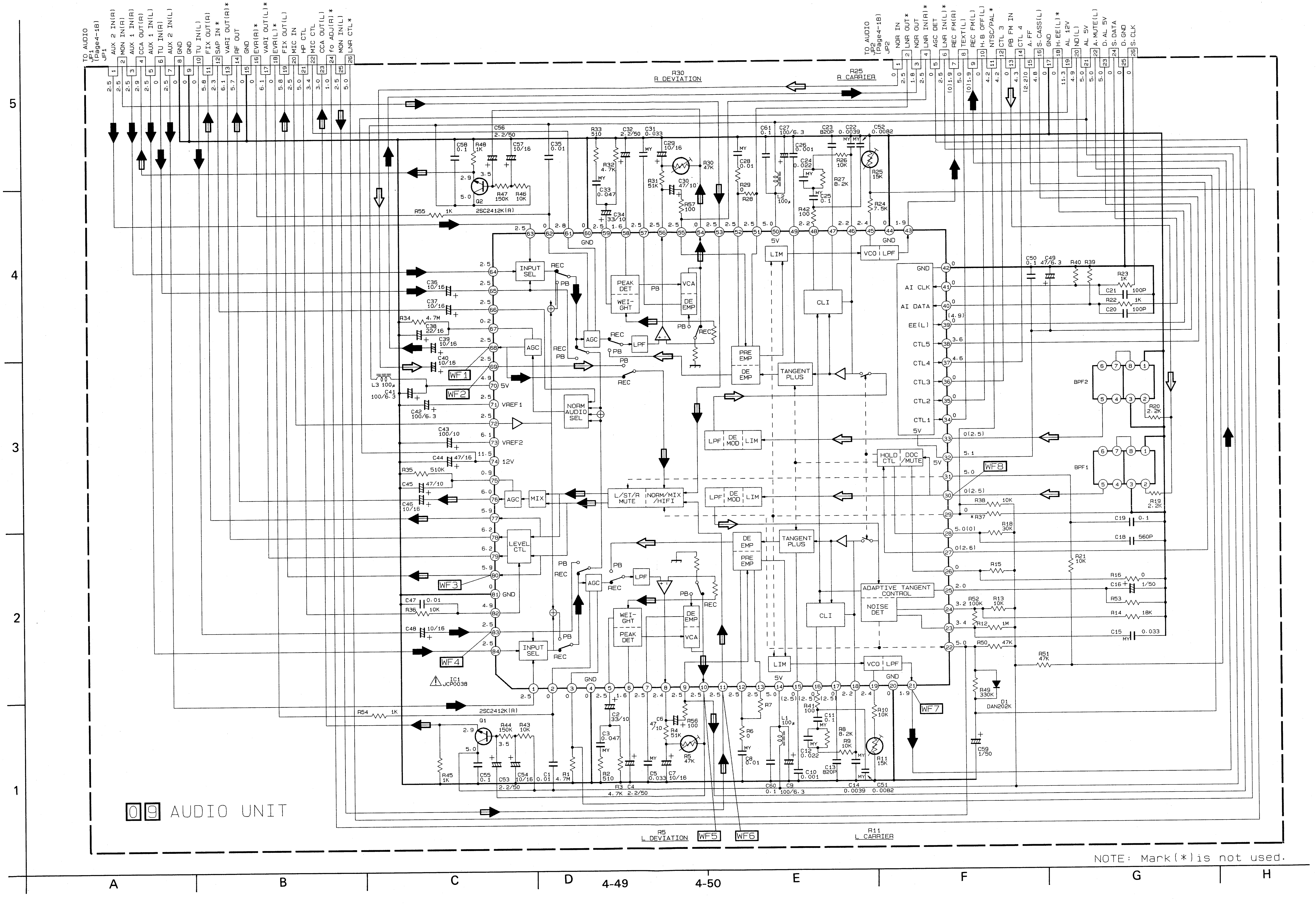

PB10773 - 01-02
TU/DEM/P/V PWB ASS'Y
PB10773 -01-02
TU/DEM/P/V PWB
J1
DIN CONNE
TUNER
IF UNIT
IF
MB
AGC
TU
AGC
VPS
SYNC
SIF
V.O.
A.O.
CLK
DATA
LOCK
5V
30V
12V
RF CONV
EVR
S1
TP1
TP2
IC101
IC401
IC201
IC202
IC203
IC204
IC205
IC206
IC207
IC208
IC209
CN1
CN2
CN3
CN4
CN5
CN6
CN7
CN8
CN9
CN10
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11

MAIN COMPONENT PARTS
LOCATION GUIDE

LEADLESS COMPONENT PARTS LOCATION GUIDE

REF.No.	LOCATION	REF.No.	LOCATION	REF.No.	LOCATION	REF.No.	LOCATION	REF.No.	LOCATION	REF.No.	LOCATION	REF.No.	LOCATION	REF.No.	LOCATION	REF.No.	LOCATION	REF.No.	LOCATION
IC		Q203	8B	ADJUSTMENT		R33	7C	R215	8B	R256	11B	R296	8A	C207	8B	C290	8B	C424	2B
IC101	2C	Q204	8C	R264	9A	R34	6A	R216	8B	R257	11B	R297	9A	C208	8B	C291	8B	C425	2B
IC201	8B	Q205	10A	IC		R35	6A	R218	8B	R259	10A	R298	9A	C209	8B	C292	8C	C426	2B
IC202	9B	Q206	10A	IC210	9C	R36	5B	R222	8B	R260	10B	R401	2B	C214	8C	C293	8C		
IC203	9C	Q208	10A	TRANSISTOR		R37	6B	R223	8B	R261	10B	CAPACITOR		C215	8C	C294	8B		
IC204	10B	Q209	11B	Q201	8B	R38	5B	R224	9B	R262	10B	C4	4C	C216	8B	C295	10A		
IC205	10B	Q210	11B	Q202	8B	R39	11C	R231	10C	R263	10B	C5	5C	C217	8B	C296	10A		
IC206	10B	Q211	8C	Q203	8B	R40	6A	R232	10C	R265	8A	C8	4C	C218	8B	C297	11A		
IC207	9B	DIODE		Q204	8C	R41	11C	R233	10C	R272	9A	C9	4C	C219	8B	C298	11A		
IC208	10A	D1	5C	Q205	10A	R42	11C	R234	10C	R273	8A	C10	4C	C220	8C	C299	11A		
IC209	8A	D2	6B	Q206	10A	R101	1C	R235	10C	R275	8A	C11	5C	C225	9C	C300	10C		
IC210	9C	D3	6A	Q208	10A	R102	2C	R236	10C	R276	8A	C13	7C	C228	9C	C301	10C		
IC401	1B	D4	6B	Q209	11B	R103	1C	R237	10C	R277	8C	C14	6B	C242	10C	C302	10C		
TRANSISTOR		D201	11B	Q210	11B	R201	8A	R238	10C	R278	10B	C17	10D	C245	10B	C303	7A		
Q1	5C	D202	9C	DIODE		R202	9B	R240	10C	R280	10B	C18	10D	C257	9A	C304	7A		
Q2	5C	D203	9B	D201	11B	R204	9B	R241	10C	R281	10B	C30	5C	C259	10B	C305	11C		
Q3	6C	CONNECTOR		D202	9C	R205	9B	R242	10C	R283	10B	C31	2A	C263	11B	C306	9B		
Q12	7B	CN1	4B	RESISTOR		R206	8B	R243	10C	R285	9A	C32	2A	C265	9A	C401	1B		
Q13	7B	CN2	6C	R1	6C	R207	8B	R244	10C	R286	9A	C101	1C	C266	9A	C402	1B		
Q14	7C	CN3	7C	R2	6C	R209	8B	R245	10C	R290	8B	C102	1C	C267	8A	C403	2B		
Q15	6B	CN4	11B	R3	6C	R210	8B	R246	10B	R291	8B	C104	1C	C268	8A	C405	1B		
Q16	6A	CN5	9D	R20	5C	R211	8B	R247	10B	R292	8B	C105	1C	C269	8A	C406	1B		
Q17	11C	CN6	9D	R30	7C	R212	8B	R248	9C	R293	8B	C107	1C	C278	8C	C407	1B		
Q201	8B	CN7	9D	R31	7C	R213	8B	R249	9C	R294	8B	C205	8B	C279	8C	C411	2B		
Q202	8B			R32	7C	R214	8B	R255	11B	R295	8B	C206	8B	C281	8A	C412	2B		

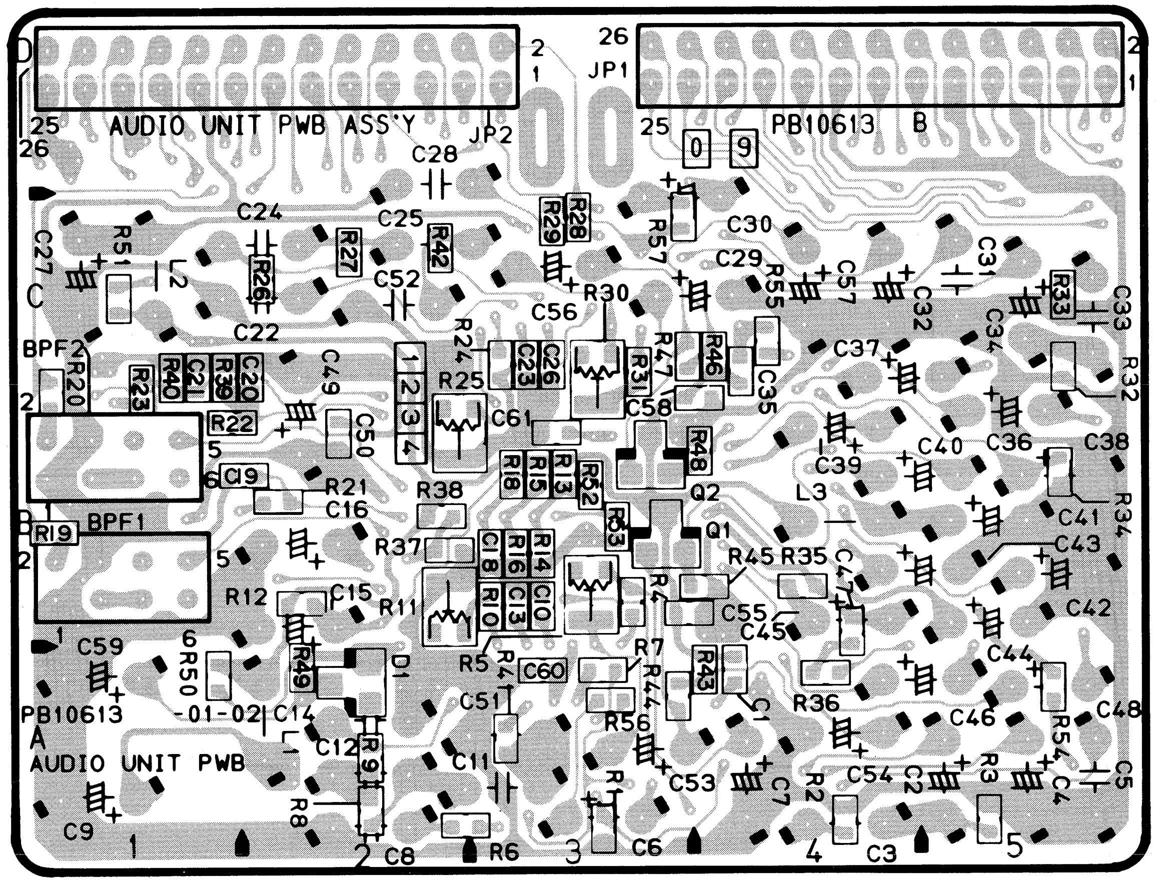
4.22 AUDIO UNIT SCHEMATIC DIAGRAM


TO AUDIO JP1 (Page4-18) JP1
1 AUX 2 IN(R)
2 MON IN(R)
3 AUX 1 IN(R)
4 CCA OUT(R)
5 AUX 1 IN(L)
6 TU IN(R)
7 AUX 2 IN(L)
8 GND
9 GND
10 TU IN(L)
11 FIX OUT(R)
12 SAP IN *
13 VARI OUT(R)*
14 RF OUT
15 GND
16 EVR(R)*
17 VARI OUT(L)*
18 EVR(L)*
19 FIX OUT(L)
20 MIC IN
21 HP CTL
22 MIC CTL
23 CCA OUT(L)
24 fo ADJ(R)*
25 MON IN(L)
26 LNR CTL *
TO AUDIO JP2 (Page4-18) JP2
1 NOR IN
2 LNR OUT *
3 NOR OUT
4 LNR IN(R)*
5 AGC DET
6 LNR IN(L)*
7 REC FM(R)
8 TEXT(L)
9 REC FM(L)
10 H.B OFF(L)
11 NTSC/PAL *
12 CTL 3
13 PB FM IN
14 CTL 4
15 A.FF
16 S.CASS(L)
17 GND
18 H.EE(L)*
19 AL 12V
20 ND(L)
21 AL 5V
22 A.MUTE(L)
23 D.AL 5V
24 S.DATA
25 D.GND
26 S.CLK
R30 R DEVIATION
R25 R CARRIER
R5 L DEVIATION
R11 L CARRIER
IC1 JCP0038
Q1 2SC2412K(R)
Q2 2SC2412K(R)
D1 DAN202K
BPF1
BPF2
INPUT SEL
AGC
NORM AUDIO SEL
L/ST/R MUTE
NORM/MIX /HIFI
MIX
LEVEL CTL
PEAK DET
WEI-GHT
VCA
DE EMP
PRE EMP
LPF
LIM
CLI
TANGENT PLUS
LPF DE MOD LIM
HOLD CTL
DOC /MUTE
VCO LPF
ADAPTIVE TANGENT CONTROL
NOISE DET
GND
AI CLK
AI DATA
EE(L)
CTL5
CTL4
CTL3
CTL2
CTL1
VREF1
VREF2
5V
12V
REC
PB
WF1
WF2
WF3
WF4
WF5
WF6
WF7
WF8
09 AUDIO UNIT
A
B
C
D
E
F
G
H
1
2
3
4
5

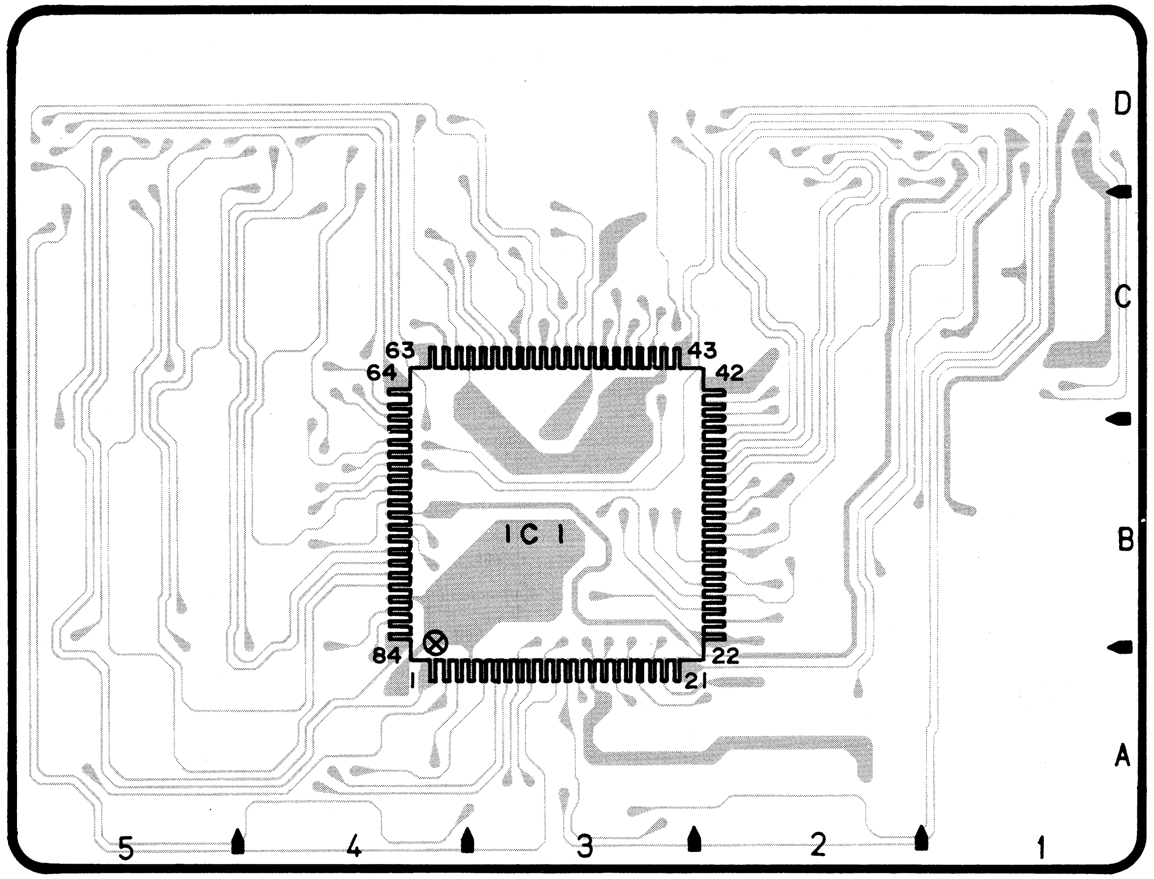
NOTE: Mark(*)is not used.

4.23 AUDIO UNIT CIRCUIT BOARD

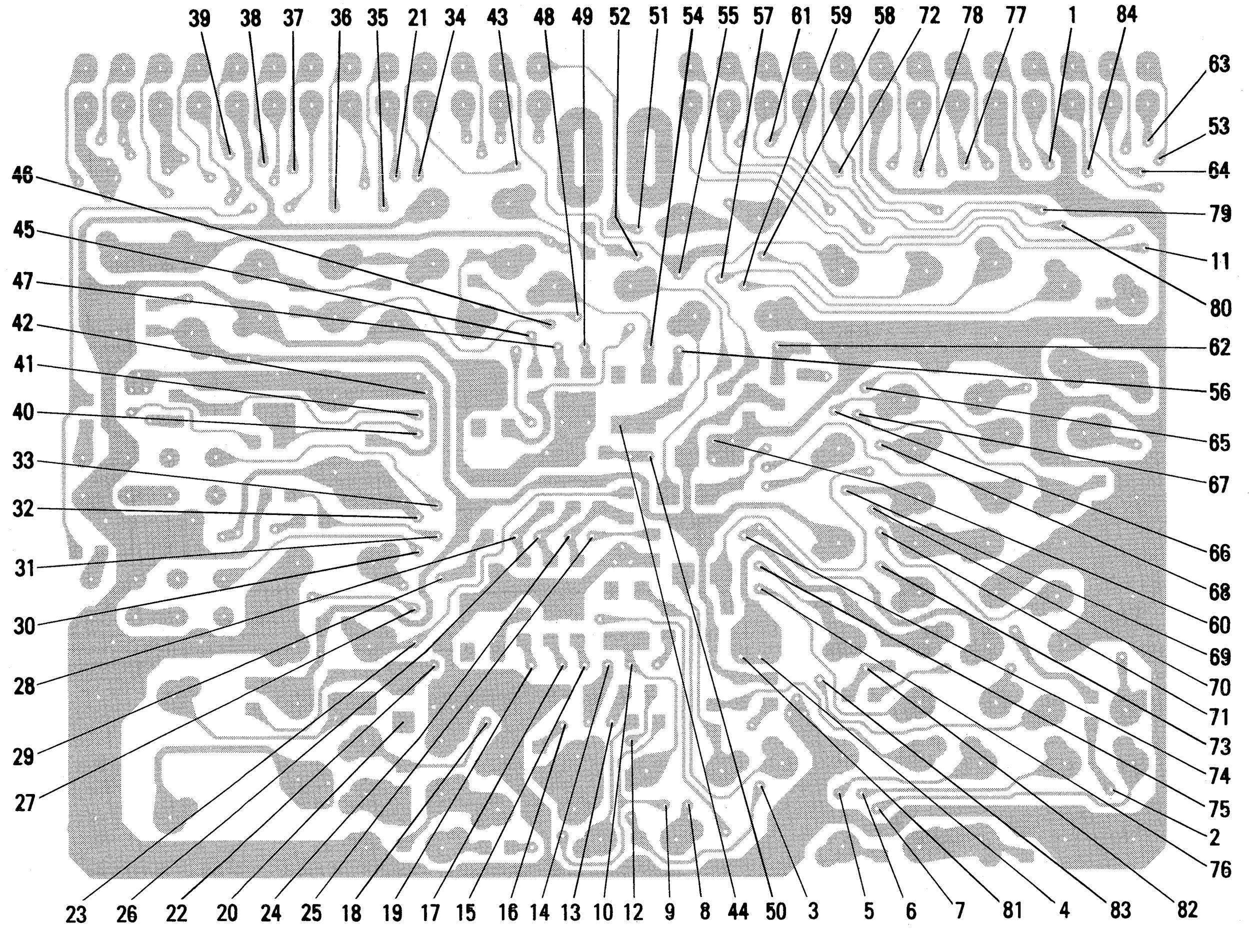
—FOIL SIDE—
(B)


AUDIO UNIT PWB ASS'Y
PB10613 B
PB10613 -01-02
AUDIO UNIT PWB
JP1
JP2
BPF1
BPF2
Q1
Q2
D1
L2
L3
1
2
3
4
5
A
B
C
D
25
26
C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C32 C33 C34 C35 C36 C37 C38 C39 C40 C41 C42 C43 C44 C45 C46 C47 C48 C49 C50 C51 C52 C53 C54 C55 C56 C57 C58 C59 C60 C61
R1 R2 R3 R4 R5 R6 R7 R8 R9 R10 R11 R12 R13 R14 R15 R16 R18 R19 R20 R21 R22 R23 R24 R25 R26 R27 R28 R29 R30 R31 R32 R33 R34 R35 R36 R37 R38 R39 R40 R41 R42 R43 R44 R45 R46 R47 R48 R49 R50 R51 R52 R53 R54 R55 R56 R57
0
9

— COMPONENT SIDE —
(A)


IC 1
63
43
64
42
84
22
1
21
A
B
C
D
1
2
3
4
5

—IC PIN NUMBER LOCATION (FOIL SIDE)—


39 38 37 36 35 21 34 43 48 49 52 51 54 55 57 61 59 58 72 78 77 1 84
63
53
64
79
11
80
62
56
65
67
66
68
60
69
70
71
73
74
75
2
76
46
45
47
42
41
40
33
32
31
30
28
29
27
23 26 22 20 24 25 18 19 17 15 16 14 13 10 12 9 8 44 50 3 5 6 7 81 4 83 82

REF. NO.	LOCATION		
IC			
IC101	B	C	6 A

Cateqory : IC

B : Foil side
(A : Component side)

C : Chip Component
(D : Discrete component)

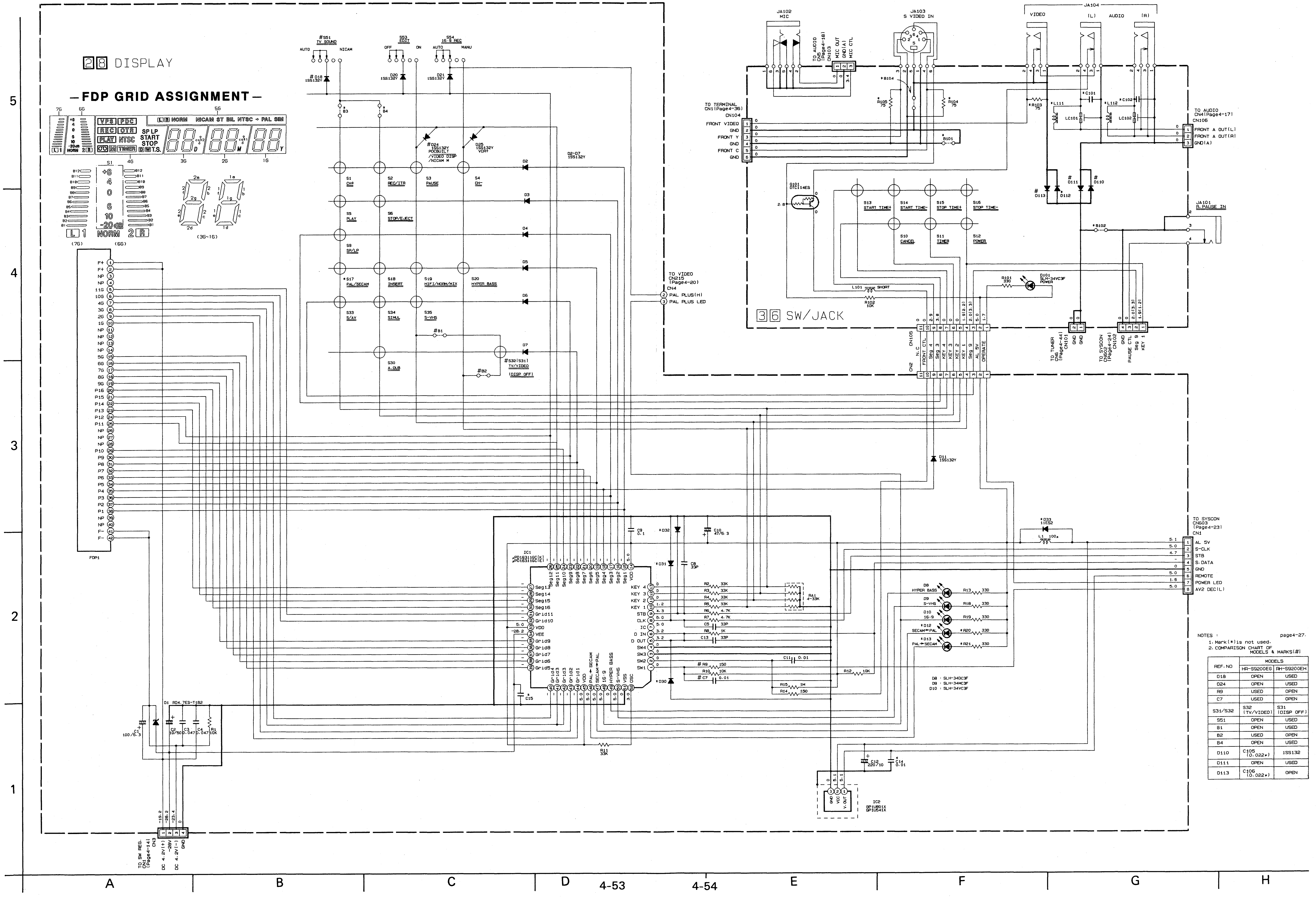
Horizontal "A" zone

Vertical "6" zone

COMPONENT PARTS LOCATION GUIDE

REF.NO.	LOCATION		
CAPACITOR			
C1	B	C	4A
C2	A	D	5A
C3	A	D	4A
C4	A	D	5A
C5	A	D	5A
C6	A	D	3A
C7	A	D	4A
C8	A	D	2A
C9	A	D	1A
C10	B	C	3B
C11	A	D	2A
C12	A	D	2A
C13	B	C	3B
C14	A	D	2A
C15	A	D	2B
C16	A	D	2B
C18	B	C	3B
C19	B	C	2B
C20	B	C	2C
C21	B	C	1C
C22	A	D	1C
C23	B	C	3C
C24	A	D	1C
C25	A	D	2C
C26	B	C	3C
C27	A	D	1C
C28	A	D	2D
C29	A	D	4C
C30	A	D	4D
C31	A	D	5C
C32	A	D	4C
C33	A	D	5C
C34	A	D	5C
C35	B	C	4C
C36	A	D	5C
C37	A	D	5C
C38	A	D	5B
C39	A	D	4B
C40	A	D	5B
C41	A	D	5B
C42	A	D	5B
C43	A	D	5B
C44	A	D	5B
C45	A	D	4B
C46	A	D	5A
C47	B	C	4B
C48	A	D	5A
C49	A	D	2C
C50	B	C	2B
C51	A	D	3A
C52	A	D	2C
C53	A	D	3A
C54	A	D	4A
C55	B	C	3B
C56	A	D	3C
C57	A	D	4C
C58	B	C	4C
C59	A	D	1A
C60	B	C	3A
C61	B	C	3B
DIODE			
D1	B	C	2A
IC			
IC1	A	C	3B
COIL			
L1	A	D	2A
L2	A	D	1C
L3	A	D	4B
TRANSISTOR			
Q1	B	C	3B
Q2	B	C	3B
RESISTOR			
R1	B	C	3A
R2	B	C	4A
R3	B	C	5A
R4	B	C	3B
R5	B	C	3B
R6	B	C	2A
R7	B	C	3A
R8	B	C	2A
R9	B	C	2A
R10	B	C	3B
R11	B	C	2B
R12	B	C	2B
R13	B	C	3B
R14	B	C	3B
R15	B	C	3B
R16	B	C	3B
R18	B	C	3B
R19	B	C	1B
R20	B	C	1C
R21	B	C	2B
R22	B	C	1C
R23	B	C	1C
R24	B	C	3C
R25	B	C	2B
R26	B	C	2C
R27	B	C	2C
R28	B	C	3C
R29	B	C	3C
R30	B	C	3C
R31	B	C	3C
R32	B	C	5C
R33	B	C	5C
R34	B	C	5B
R35	B	C	4B
R36	B	C	4A
R37	B	C	2B
R38	B	C	2B
R39	B	C	1C
R40	B	C	1C
R41	B	C	3A
R42	B	C	2C
R43	B	C	4A
R44	B	C	3A
R45	B	C	4B
R46	B	C	4C
R47	B	C	3C
R48	B	C	4B
R49	B	C	2A
R50	B	C	1A
R51	B	C	1C
R52	B	C	3B
R53	B	C	3B
R54	B	C	5A
R55	B	C	4C
R56	B	C	3A
R57	B	C	3C
OTHERS			
BPF1	A	D	1B
BPF2	A	D	1B
JP1	A	D	5D
JP2	A	D	3D

4.24 DISPLAY AND SW/JACK SCHEMATIC DIAGRAM


28 DISPLAY
-FDP GRID ASSIGNMENT-
36 SW/JACK
#S51 TV SOUND
S53 EDIT
S54 16:9 REC
S1 CH+
S2 REC/ITR
S3 PAUSE
S4 CH-
S5 PLAY
S6 STOP/EJECT
S9 SP/LP
S17 PAL/SECAM
S18 INSERT
S19 HIFI/NORM/MIX
S20 HYPER BASS
S33 S/AV
S34 SIMUL
S35 S-VHS
S30 A.DUB
#S32(S31) TV/VIDEO (DISP OFF)
S13 START TIME+
S14 START TIME-
S15 STOP TIME+
S16 STOP TIME-
S10 CANCEL
S11 TIMER
S12 POWER
TO VIDEO CN215 (Page4-20) CN4
PAL PLUS(H)
PAL PLUS LED
TO TERMINAL CN1(Page4-36) CN104
JA102 MIC
JA103 S VIDEO IN
JA104 VIDEO (L) AUDIO (R)
TO AUDIO CN5 (Page4-18) CN103
TO AUDIO CN4(Page4-17) CN106
JA101 A.PAUSE IN
TO TUNER CN6 (Page4-4) CN101
TO SYSCON CN502 (Page4-24) CN102
TO SYSCON CN503 (Page4-23) CN1
AL 5V
S-CLK
STB
S.DATA
GND
REMOTE
POWER LED
AV2 DEC(L)
IC1 μPD16311GC(A) μPD16311GC(E)
IC2 GP1U601X GP1U541X
D8 : SLH-34DC3F
D9 : SLH-34MC3F
D10 : SLH-34VC3F
TO SW REG. CN1 (Page4-14) CN3
DC 4.2V(+)
-28V
DC 4.2V(-)
GND
FDP1
A
B
C
D
E
F
G
H
1
2
3
4
5

NOTES : page4-27.

1. Mark(*)is not used.
2. COMPARISON CHART OF MODELS & MARKS(#)

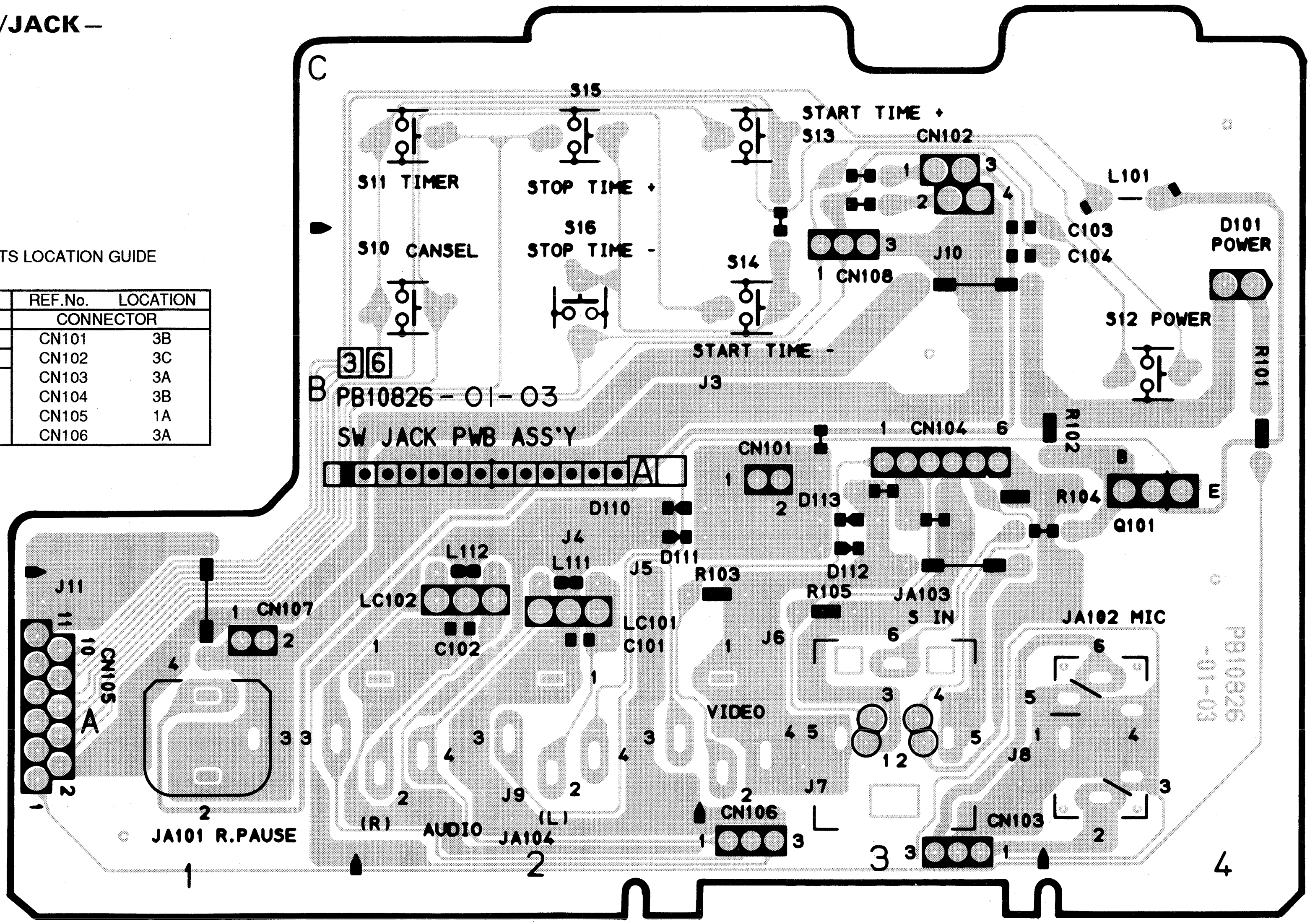
REF.NO	MODELS	
	HR-S9200EG	RH-S9200EH
D18	OPEN	USED
D24	OPEN	USED
R9	USED	OPEN
C7	USED	OPEN
S31/S32	S32 (TV/VIDEO)	S31 (DISP OFF)
S51	OPEN	USED
B1	OPEN	USED
B2	USED	OPEN
B4	OPEN	USED
D110	C105 (0.022*)	1SS132
D111	OPEN	USED
D113	C106 (0.022*)	OPEN

4.25 DISPLAY AND SW/JACK CIRCUIT BOARD

–SW/JACK–

MAIN COMPONENT PARTS LOCATION GUIDE
<SW/JACK PWB>

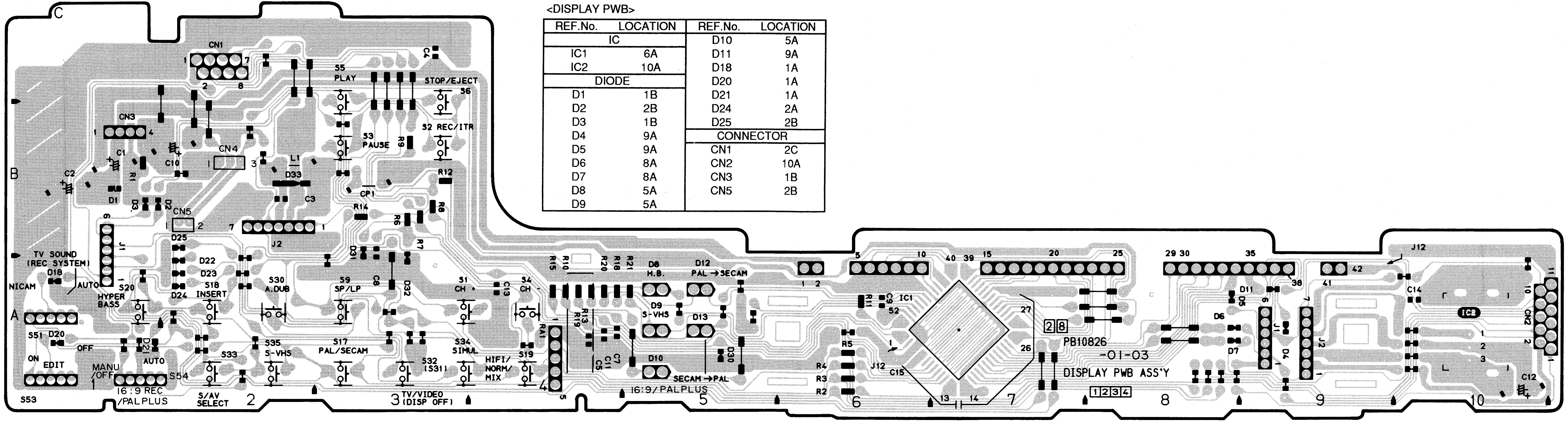
REF.No.	LOCATION	REF.No.	LOCATION
TRANSISTOR		CONNECTOR	
Q101	4B	CN101	3B
DIODE		CN102	3C
D101	4B	CN103	3A
D110	2B	CN104	3B
D111	2B	CN105	1A
		CN106	3A


C
B
A
S15
S11 TIMER
STOP TIME +
S10 CANSEL
S16
STOP TIME -
START TIME +
S13
CN102
L101
C103
C104
D101
POWER
J10
CN108
S14
S12 POWER
START TIME -
J3
R101
R102
36
PB10826 - 01 - 03
SW JACK PWB ASS'Y
CN101
CN104
R104
Q101
E
D110
D113
D111
D112
J4
L112
L111
J5
R103
R105
JA103
S IN
JA102 MIC
J11
CN107
LC102
LC101
C102
C101
J6
CN105
VIDEO
J8
J9
J7
(R)
AUDIO
(L)
JA104
CN106
CN103
JA101 R.PAUSE
1
2
3
4

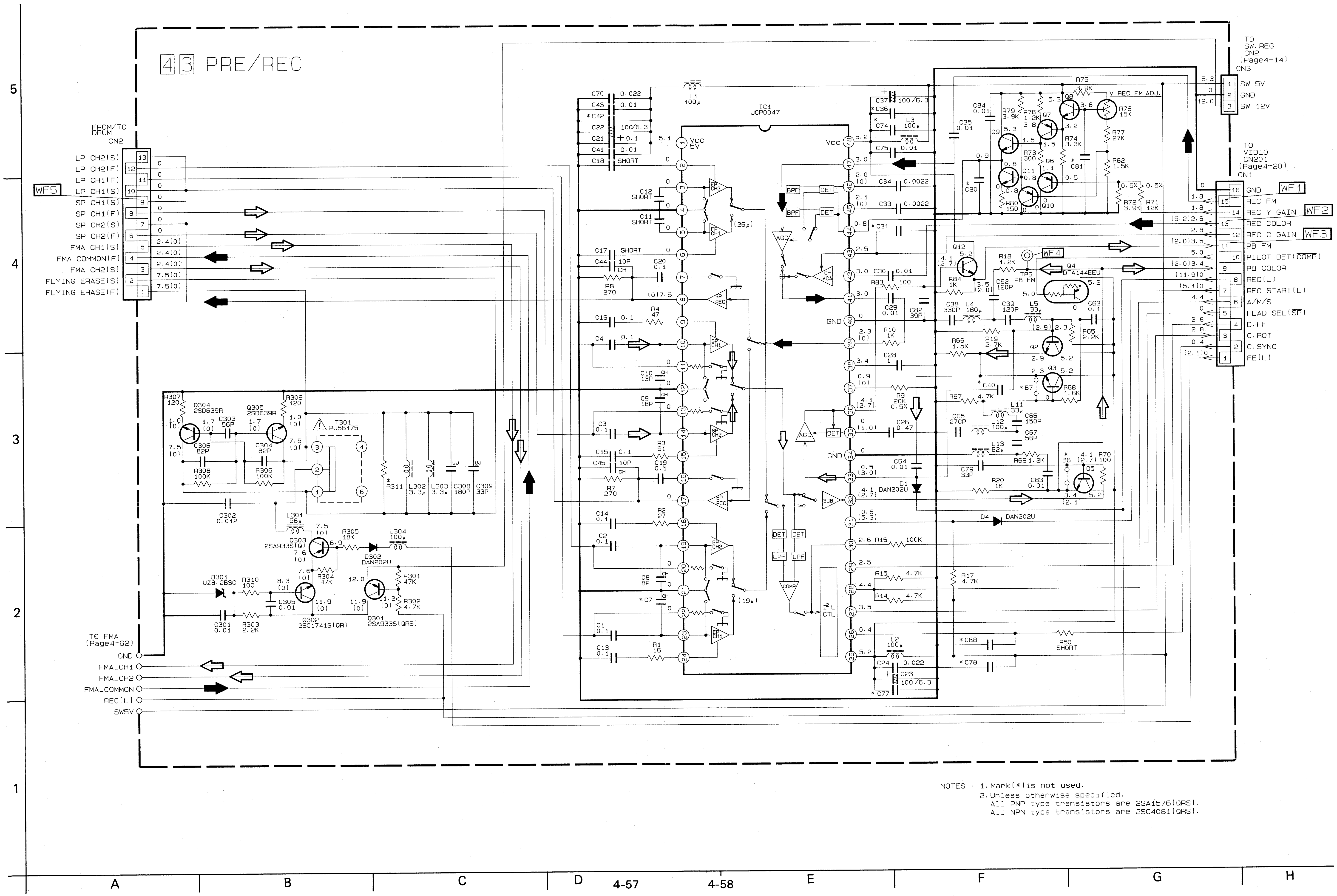
–DISPLAY–

MAIN COMPONENT PARTS LOCATION GUIDE
<DISPLAY PWB>

REF.No.	LOCATION	REF.No.	LOCATION
IC		D10	5A
IC1	6A	D11	9A
IC2	10A	D18	1A
DIODE		D20	1A
D1	1B	D21	1A
D2	2B	D24	2A
D3	1B	D25	2B
D4	9A	CONNECTOR	
D5	9A	CN1	2C
D6	8A	CN2	10A
D7	8A	CN3	1B
D8	5A	CN5	2B
D9	5A		


C
B
A
CN1
CN3
CN4
CN5
C1
C2
C3
C4
C10
D1
D3
D33
L1
S5 PLAY
STOP/EJECT
S6
S2 REC/ITR
S3 PAUSE
R12
CP1
R14
J1
J2
TV SOUND (REC SYSTEM)
D18
NICAM
AUTO
S20
HYPER BASS
D25
D22
D23
D24
S18 INSERT
S30 A.DUB
S9 SP/LP
S1 CH
S4 CH
S51
D20
OFF
ON
EDIT
MANU /OFF
AUTO
S53
S54
16:9 REC /PAL PLUS
S33
S/AV SELECT
S35 S-VHS
S17 PAL/SECAM
S32 (S31)
TV/VIDEO (DISP OFF)
S34 SIMUL
HIFI/ NORM/ MIX
S19
D8 H.B.
D12 PAL → SECAM
D9 S-VHS
D13
D10
SECAM → PAL
16:9/PALPLUS
IC1
J12
28
PB10826 -01-03
DISPLAY PWB ASS'Y
1234
D11
D5
D6
D7
D4
C14
IC2
CN2
C12
1
2
3
4
5
6
7
8
9
10

4.26 PRE/REC SCHEMATIC DIAGRAM

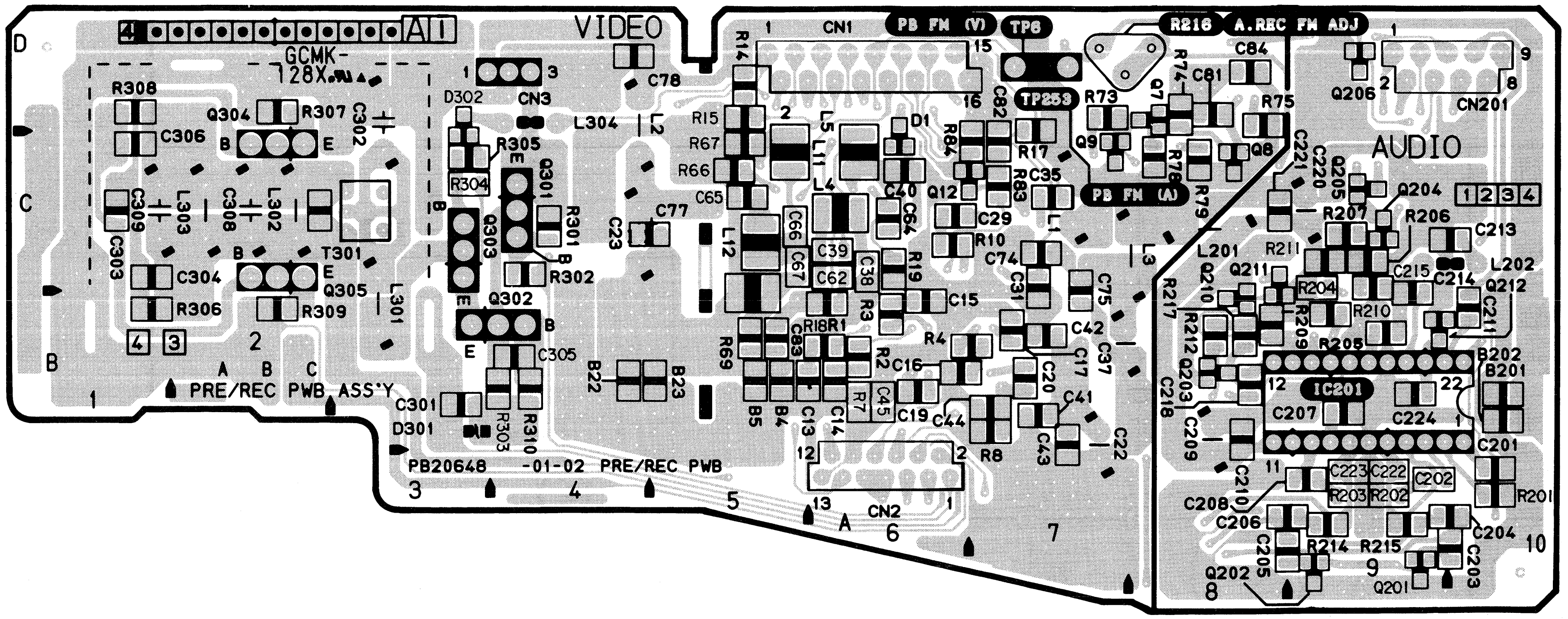


43 PRE/REC
FROM/TO DRUM CN2
LP CH2(S)
LP CH2(F)
LP CH1(F)
LP CH1(S)
SP CH1(S)
SP CH1(F)
SP CH2(S)
SP CH2(F)
FMA CH1(S)
FMA COMMON(F)
FMA CH2(S)
FLYING ERASE(S)
FLYING ERASE(F)
WF5
WF1
WF2
WF3
WF4
IC1 JCP0047
Vcc 5V
L1 100µ
TO SW.REG CN2 (Page4-14) CN3
SW 5V
GND
SW 12V
TO VIDEO CN201 (Page4-20) CN1
GND
REC FM
REC Y GAIN
REC COLOR
REC C GAIN
PB FM
PILOT DET(COMP)
PB COLOR
REC(L)
REC START(L)
A/M/S
HEAD SEL(SP)
D.FF
C.ROT
C.SYNC
FE(L)
V REC FM ADJ.
R75 3.9K
R76 15K
R77 27K
R82 1.5K
R72 3.9K
R71 12K
R79 3.9K
R78 1.2K
R74 3.3K
R73 300
R80 150
Q6
Q7
Q8
Q9
Q10
Q11
Q12
Q2
Q3
Q5
Q4 DTA144EEU
TP6 PB FM
D1 DAN202U
D4 DAN202U
T301 PU56175
Q304 2SD639R
Q305 2SD639R
Q303 2SA933S(Q)
Q302 2SC1741S(QR)
Q301 2SA933S(QRS)
D301 UZ8.2BSC
D302 DAN202U
L301 56µ
L302 3.3µ
L303 3.3µ
L304 100µ
C308 180P
C309 33P
C302 0.012
C301 0.01
C305 0.01
R307 120
R309 120
R308 100K
R306 100K
R305 18K
R304 47K
R301 47K
R302 4.7K
R303 2.2K
R310 100
TO FMA (Page4-62)
GND
FMA_CH1
FMA_CH2
FMA_COMMON
REC(L)
SW5V
AGC
BPF
DET
C-VCA
LPF
COMP
I²L CTL
3dB
EP CH1
EP CH2
SP CH1
SP CH2
SP REC
EP REC
A
B
C
D
E
F
G
H
1
2
3
4
5

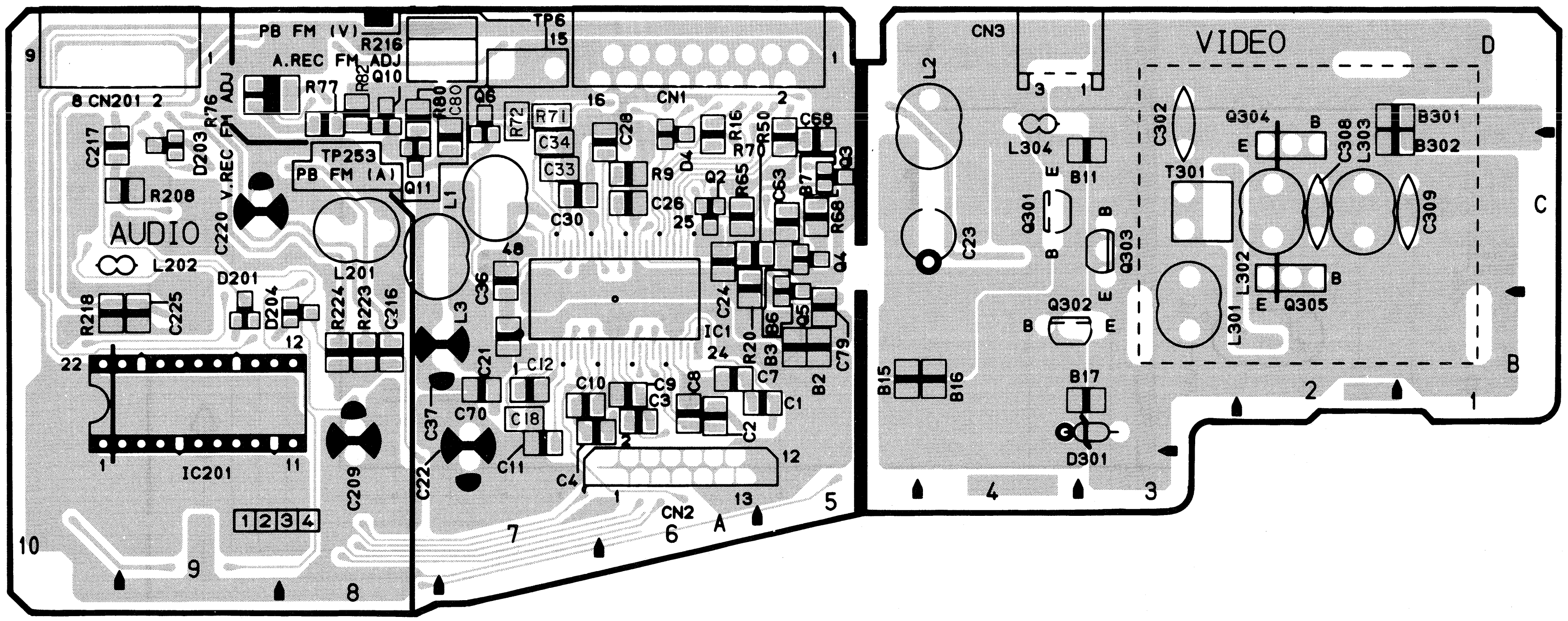
NOTES : 1. Mark(*)is not used.
2. Unless otherwise specified.
All PNP type transistors are 2SA1576(QRS).
All NPN type transistors are 2SC4081(QRS).

4.27 PRE/REC CIRCUIT BOARD

—FOIL SIDE—
(B)


GCMK-128X
VIDEO
CN1
PB FM (V)
TP6
R216
A.REC FM ADJ
AUDIO
CN201
CN3
CN2
IC201
TP253
PB FM (A)
PRE/REC PWB ASS'Y
PB20648 -01-02 PRE/REC PWB
A
B
C
D
1
2
3
4
5
6
7
8
9
10

—COMPONENT SIDE—
(A)


PB FM (V)
R216
A.REC FM ADJ
TP6
CN201
R76
V.REC FM ADJ
TP253
PB FM (A)
AUDIO
IC201
IC1
CN1
CN2
CN3
VIDEO
A
B
C
D
1
2
3
4
5
6
7
8
9
10

MAIN COMPONENT
PARTS LOCATION
GUIDE

REF.No.	LOCATION
IC	
IC1	A-6B
IC201	B-9B
TRANSISTOR	
Q2	A-6C
Q3	A-6C
Q4	A-6C
Q5	A-6B
Q6	A-7D
Q7	B-8D
Q8	B-8C
Q9	B-7C
Q10	A-8D
Q11	A-8C
Q12	B-6C
Q201	B-9A
Q202	B-9A
Q203	B-8B
Q204	B-9C
Q205	B-9C
Q206	B-9D
Q210	B-8B
Q211	B-8C
Q212	B-9B
Q301	B-3C
Q302	B-3B
Q303	B-3C
Q304	B-2C
Q305	B-2C
DIODE	
D1	B-6D
D4	A-6C
D201	A-9B
D203	A-9C
D204	A-8B
D301	B-3B
D302	B-3D
CONNECTOR	
CN1	B-6D
CN2	B-6A
CN3	B-4D
CN201	B-10D
ADJUSTMENT	
R76	A-9D
R216	B-8D
TEST POINT	
TP6	B-7D
TP253	B-7C

REF.No.	LOCATION
RESISTOR	
R1	B-6B
R2	B-6B
R3	B-6B
R4	B-6B
R7	B-6B
R8	B-7B
R9	A-6C
R10	B-6C
R14	B-5D
R15	B-5D
R16	A-6C
R17	B-7C
R18	B-6B
R19	B-6C
R20	A-6B
R50	A-5C
R65	A-6C
R66	B-5C
R67	B-5C
R68	A-5C
R69	B-5B
R70	A-6C
R71	A-7D
R72	A-7D
R73	B-7D
R74	B-8D
R75	B-8D
R77	A-8D
R78	B-8C
R79	B-8C
R80	A-8D
R82	A-8D
R83	B-7C
R84	B-6C
R201	B-10A
R202	B-9A
R203	B-9A
R204	B-9C
R205	B-9B
R206	B-9C
R207	B-9C
R208	B-9C
R209	B-8B
R210	B-9B
R211	B-9C
R212	B-8B
R214	B-9A
R215	B-9A
R217	B-8B
R218	A-10B
R223	A-8B
R224	A-8B
R301	B-4C
R302	B-4C
R303	B-4B
R304	B-3C
R305	B-3C
R306	B-1B
R307	B-2D
R308	B-1D
R309	B-2B
R310	B-4B
CAPACITOR	
C1	A-5B
C2	A-6B
C3	A-6B
C4	A-7B
C7	A-6B
C8	A-6B
C9	A-6B
C10	A-7B
C11	A-7B
C12	A-7B
C13	A-7B
C14	B-6B
C15	B-6B
C16	B-6B
C17	B-7B
C18	A-7B
C19	B-6B
C20	B-7B
C21	A-7B
C24	A-6C

REF.No.	LOCATION
C26	A-6C
C28	A-6C
C29	B-6C
C30	A-7C
C31	A-7B
C33	A-7C
C34	A-7C
C35	B-7C
C36	A-7C
C38	B-6C
C39	B-6C
C40	B-6C
C41	B-7B
C42	B-7B
C43	B-7B
C44	B-7B
C62	B-6C
C63	A-5C
C64	B-6C
C65	B-5C
C66	B-5C
C67	B-5C
C68	A-5D
C70	A-7B
C74	B-7C
C77	B-4C
C79	A-5B
C80	A-7D
C81	B-8D
C82	B-7D
C83	B-5B
C84	B-8D
C201	B-10A
C202	B-9A
C203	B-10A
C204	B-10A
C205	B-8A
C206	B-8A
C207	B-9B
C208	B-9A
C210	B-8B
C211	B-10B
C213	B-10C
C214	B-9C
C215	B-9C
C216	A-8B
C217	A-10C
C218	B-8B
C221	B-8C
C222	B-9A
C223	B-9A
C224	B-9B
C225	A-9B
C301	B-3B
C303	B-1C
C304	B-1C
C305	B-4B
C306	B-1C

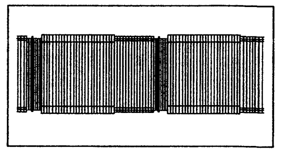
LEADLESS
COMPONENT PARTS
LOCATION GUIDE

REF.No.	LOCATION
IC	
IC1	A-6B
TRANSISTOR	
Q2	A-6C
Q3	A-6C
Q4	A-6C
Q5	A-6B
Q6	A-7D
Q7	B-8D
Q8	B-8C
Q9	B-7C
Q10	A-8D
Q11	A-8C
Q12	B-6C
Q201	B-9A
Q202	B-9A
Q203	B-8B
Q204	B-9C
Q205	B-9C
Q206	B-9D
Q210	B-8B
Q211	B-8C
Q212	B-9B
DIODE	
D1	B-6D
D4	A-6C
D201	A-9B
D203	A-9C
D204	A-8B
D302	B-3D

WAVEFORMS

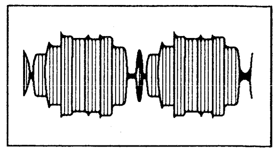
— PRE/REC —

WF1 CN1-15
REC FM



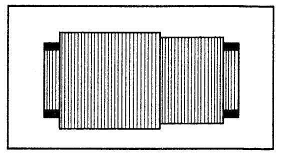
REC0.2Vp-p
10mV/5msec/DIV

WF2 CN1-13
REC COLOR



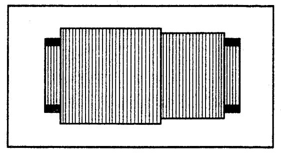
REC0.26Vp-p
10mV/20µsec/DIV

WF3 CN1-11
PB FM



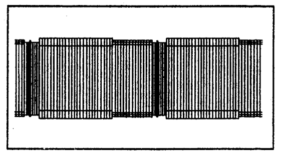
PB0.4Vp-p
10mV/5msec/DIV

WF4 TP6
PB FM



PB0.32Vp-p
10mV/5msec/DIV

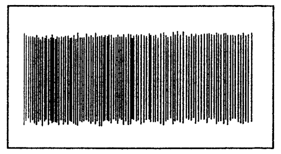
WF5 CN2-9
SP CH1



REC3.2Vp-p
0.1V/5msec/DIV

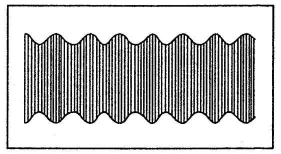
— FMA PRE/REC —

WF1 IC201-4



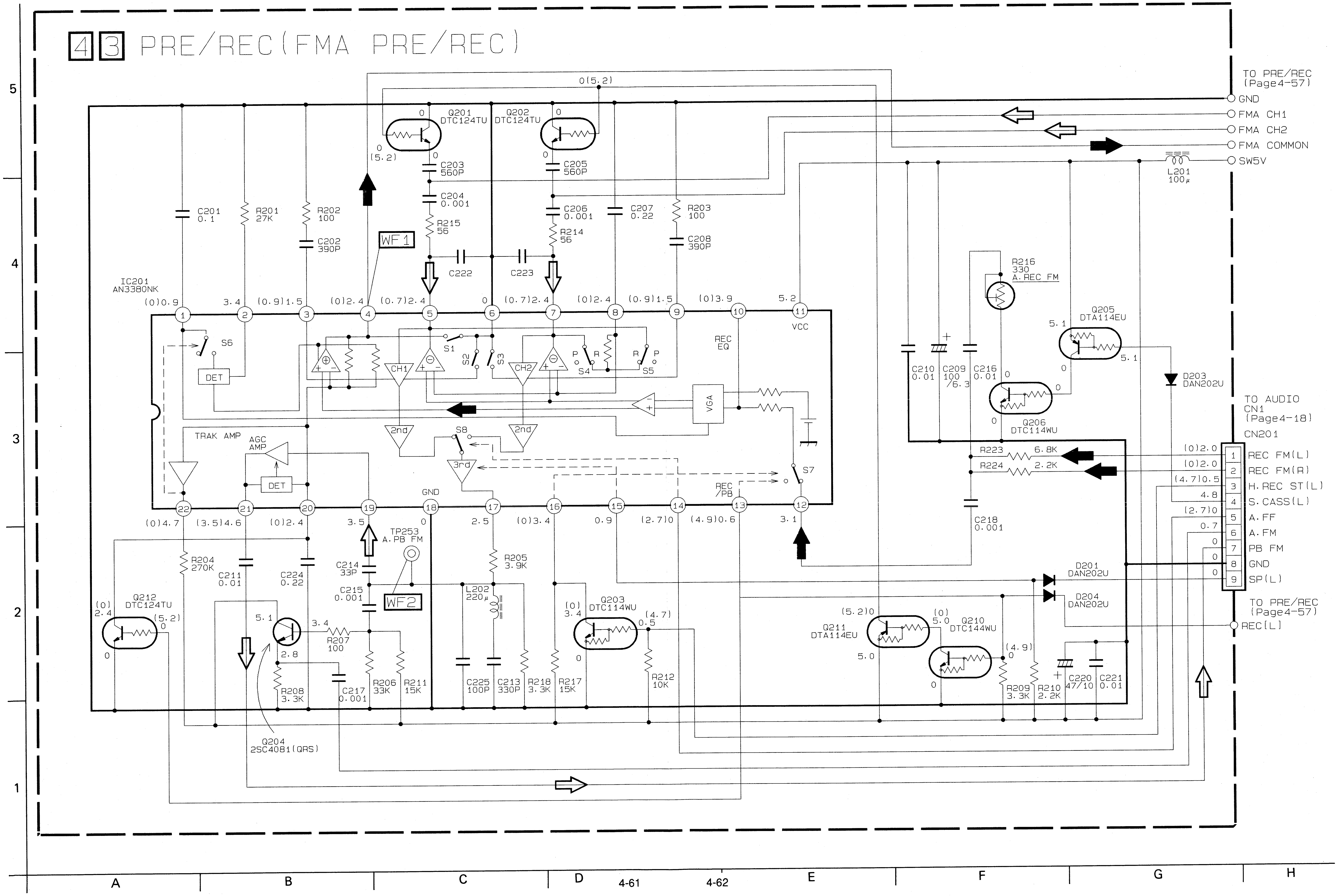
REC0.7Vp-p
20mV/20µsec/DIV

WF2 TP253
PB FM

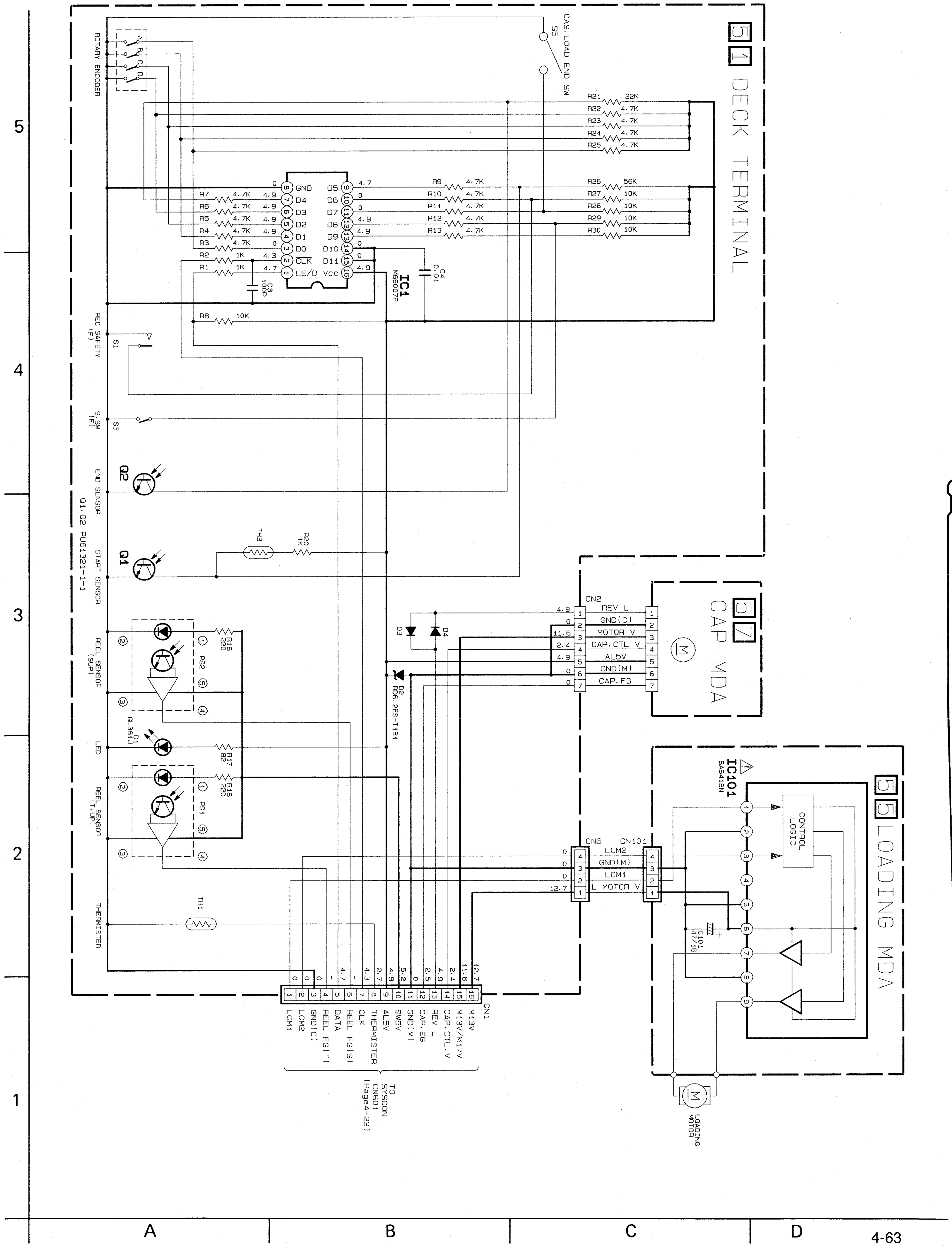


PB0.028Vp-p
10mV(PULL x10MAG)
/1msec/DIV

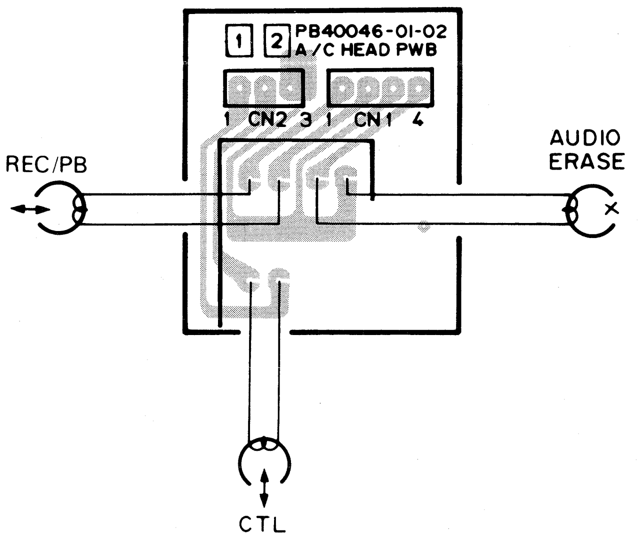
4.28 FMA PRE/REC SCHEMATIC DIAGRAM


43 PRE/REC(FMA PRE/REC)
TO PRE/REC (Page4-57)
GND
FMA CH1
FMA CH2
FMA COMMON
SW5V
L201 100μ
Q201 DTC124TU
Q202 DTC124TU
0(5.2)
C203 560P
C205 560P
C204 0.001
C206 0.001
C201 0.1
R201 27K
R202 100
C202 390P
C207 0.22
R203 100
C208 390P
R215 56
R214 56
WF1
C222
C223
IC201 AN3380NK
(0)0.9
3.4
(0.9)1.5
(0)2.4
(0.7)2.4
0
(0.7)2.4
(0)2.4
(0.9)1.5
(0)3.9
5.2
VCC
S6
DET
S1
S2
S3
S4
S5
CH1
CH2
REC EQ
VGA
2nd
3rd
S8
S7
TRAK AMP
AGC AMP
DET
GND
REC /PB
(0)4.7
(3.5)4.6
(0)2.4
3.5
0
2.5
(0)3.4
0.9
(2.7)0
(4.9)0.6
3.1
TP253 A.PB FM
WF2
R204 270K
C211 0.01
C224 0.22
C214 33P
C215 0.001
R205 3.9K
L202 220μ
Q212 DTC124TU
(0) 2.4
(5.2)
Q204 2SC4081(QRS)
5.1
3.4
2.8
R207 100
R208 3.3K
C217 0.001
R206 33K
R211 15K
C225 100P
C213 330P
R218 3.3K
R217 15K
Q203 DTC114WU
(0) 3.4
(4.7) 0.5
R212 10K
R216 330 A.REC FM
Q205 DTA114EU
5.1
D203 DAN202U
C210 0.01
C209 100 /6.3
C216 0.01
Q206 DTC114WU
R223 6.8K
R224 2.2K
C218 0.001
D201 DAN202U
D204 DAN202U
Q211 DTA114EU
(5.2)0
5.0
Q210 DTC144WU
(0) 5.0
(4.9) 0
R209 3.3K
R210 2.2K
C220 47/10
C221 0.01
TO AUDIO CN1 (Page4-18)
CN201
(0)2.0
(0)2.0
(4.7)0.5
4.8
(2.7)0
0.7
1 REC FM(L)
2 REC FM(R)
3 H.REC ST(L)
4 S.CASS(L)
5 A.FF
6 A.FM
7 PB FM
8 GND
9 SP(L)
TO PRE/REC (Page4-57)
REC(L)
5
4
3
2
1
A
B
C
D
E
F
G
H

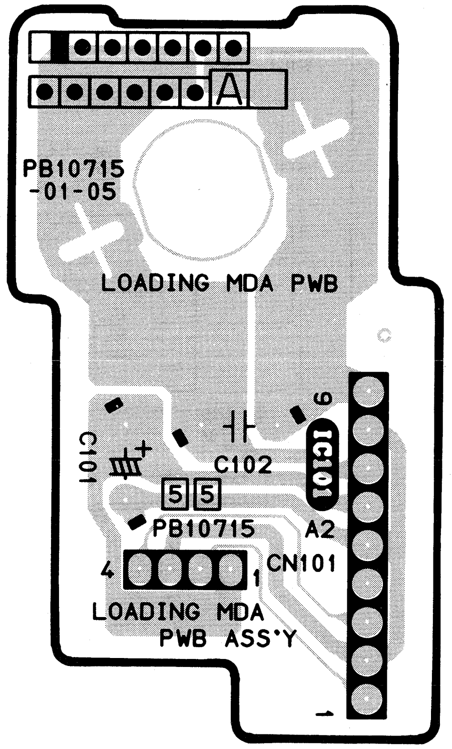
4.29 DECK TERMINAL SCHEMATIC DIAGRAM, DECK TERMINAL, LOADING MDA AND A/C HEAD CIRCUIT BOARDS

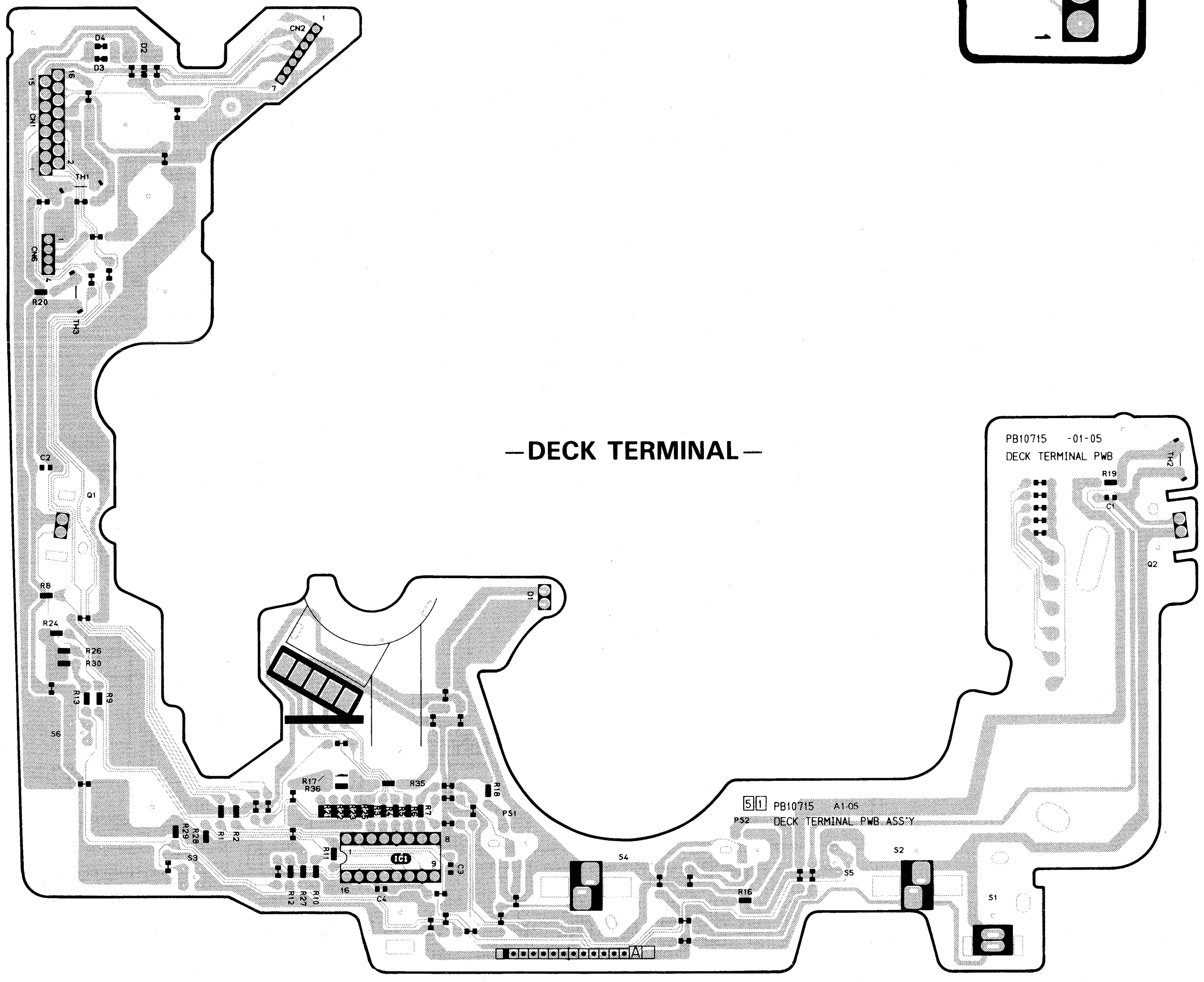

51 DECK TERMINAL
ROTARY ENCODER
CAS. LOAD END SW S5
R21 22K
R22 4.7K
R23 4.7K
R24 4.7K
R25 4.7K
R26 56K
R27 10K
R28 10K
R29 10K
R30 10K
R9 4.7K
R10 4.7K
R11 4.7K
R12 4.7K
R13 4.7K
R1 1K
R2 1K
R3 4.7K
R4 4.7K
R5 4.7K
R6 4.7K
R7 4.7K
R8 10K
GND
D0
D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
CLK
LE/D
VCC
IC1 M56007P
C3 100P
C4 0.01
REC SAFETY (F)
S1
S.SW (F)
S3
END SENSOR
Q2
Q1.Q2 PU61321-1-1
START SENSOR
Q1
TH3
R20 1K
REEL SENSOR (SUP)
PS2
R16 220
LED
D1 GL381J
R17 82
REEL SENSOR (T.UP)
PS1
R18 220
THERMISTER
TH1
D3
D4
D2 RD6.2ES-T1B1
CN2
REV L
GND(C)
MOTOR V
CAP. CTL V
AL5V
GND(M)
CAP. FG
57 CAP MDA
CN6
CN101
LCM2
GND(M)
LCM1
L MOTOR V
IC101 BA6418N
CONTROL LOGIC
C101 47/16
55 LOADING MDA
LOADING MOTOR
CN1
LCM1
LCM2
GND(C)
REEL FG(T)
DATA
REEL FG(S)
CLK
THERMISTER
AL5V
SW5V
GND(M)
CAP. FG
REV L
CAP. CTL. V
M13V/M17V
M13V
TO SYSCON CN601 (Page4-23)
A
B
C
D
1
2
3
4
5

-A/C HEAD-


1 2 PB40046-01-02 A/C HEAD PWB
1 CN2 3
1 CN1 4
REC/PB
AUDIO ERASE
CTL

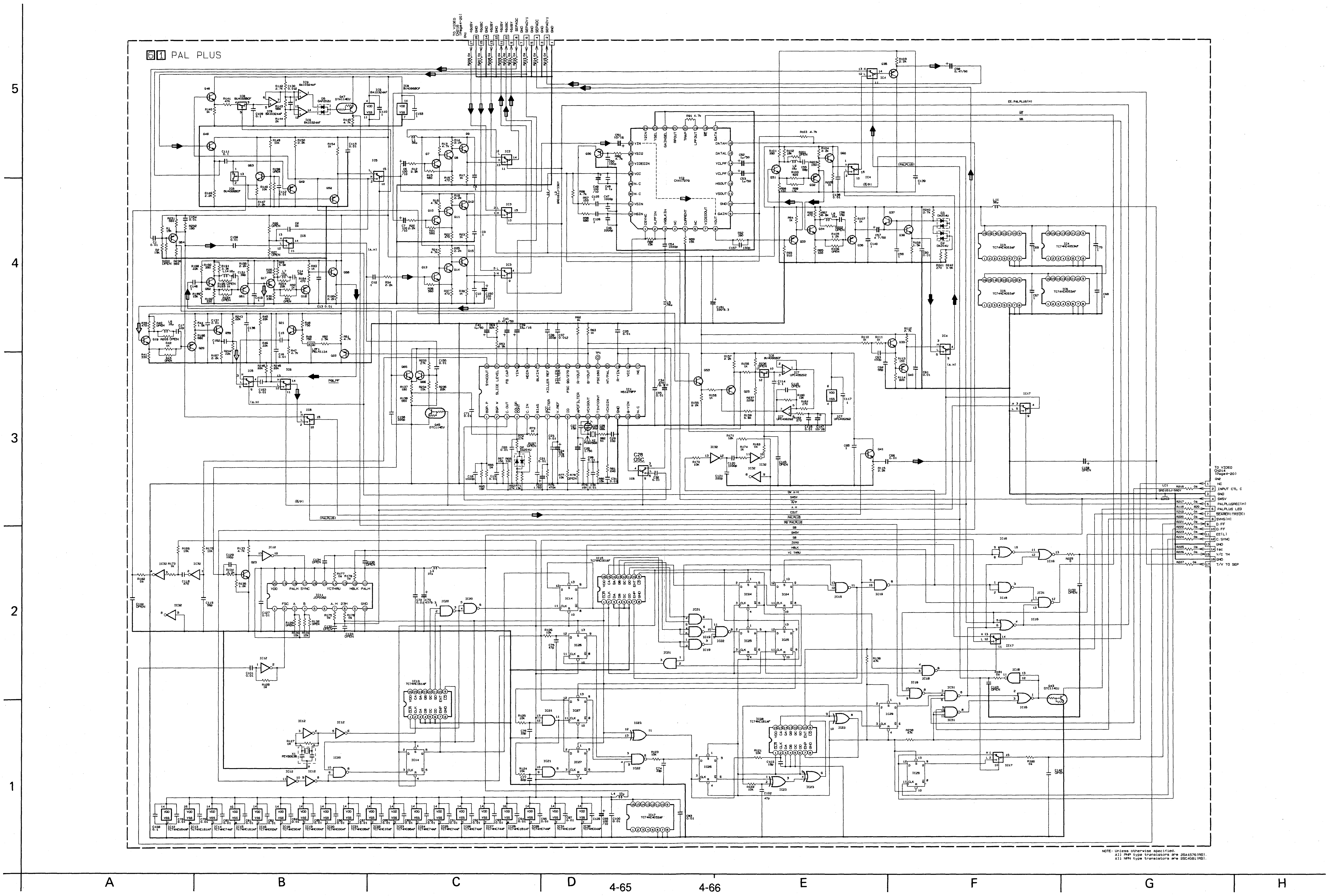
-LOADING MDA-


A
PB10715 -01-05
LOADING MDA PWB
C101
C102
IC101
9
55
PB10715
A2
4
1
CN101
LOADING MDA PWB ASS'Y
1


PB10715 -01-05 DECK TERMINAL PWB
51 PB10715 A1-05 DECK TERMINAL PWB ASS'Y
CN1
CN2
CN6
IC1
TH1
TH3
Q1
Q2
S1
S2
S3
S4
S5
S6
PS1
PS2
A

-DECK TERMINAL-

4.30 PAL PLUS SCHEMATIC DIAGRAM


61 PAL PLUS
TO VIDEO CN216 (Page4-20)
CN1
1 GND
2 SEPADY1
3 GND
4 SEPADC
5 GND
6 SEPADY1
7 GND
8 SEPADC
9 +6dBY
10 +6dBC
11 +6dBY
12 GND
13 +6dBY
14 GND
15 +6dBC
16 GND
17 +6dBY
IC2 CXA1707Q
IC1 HD1276FP
C28 OSC
IC11 JCP0082
IC13 TC74HC161AF
IC28 TC74HC161AF
IC3 TC74HC4053AF
IC4 TC74HC4053AF
IC5 TC74HC4053AF
IC6 TC74HC4053AF
IC17 TC74HC4053AF
TO VIDEO CN214 (Page4-20)
CN2
LC1 QRD161J-0R0Y
1 NC
2 INPUT CTL C
3 GND
4 SW5V
5 PALPLUSREC(H)
6 PALPLUS LED
7 SEARCH(TRICK)
8 SVHS(H)
9 D.FF
10 D.FF
11 EE(L)
12 C.SYNC
13 GND
14 fsc
15 Y/C TH
16 GND
17 T/V TO SEP
A
B
C
D
E
F
G
H
1
2
3
4
5

NOTE: Unless otherwise specified.
All PNP type transistors are 2SA1576(RS).
All NPN type transistors are 2SC4081(RS).

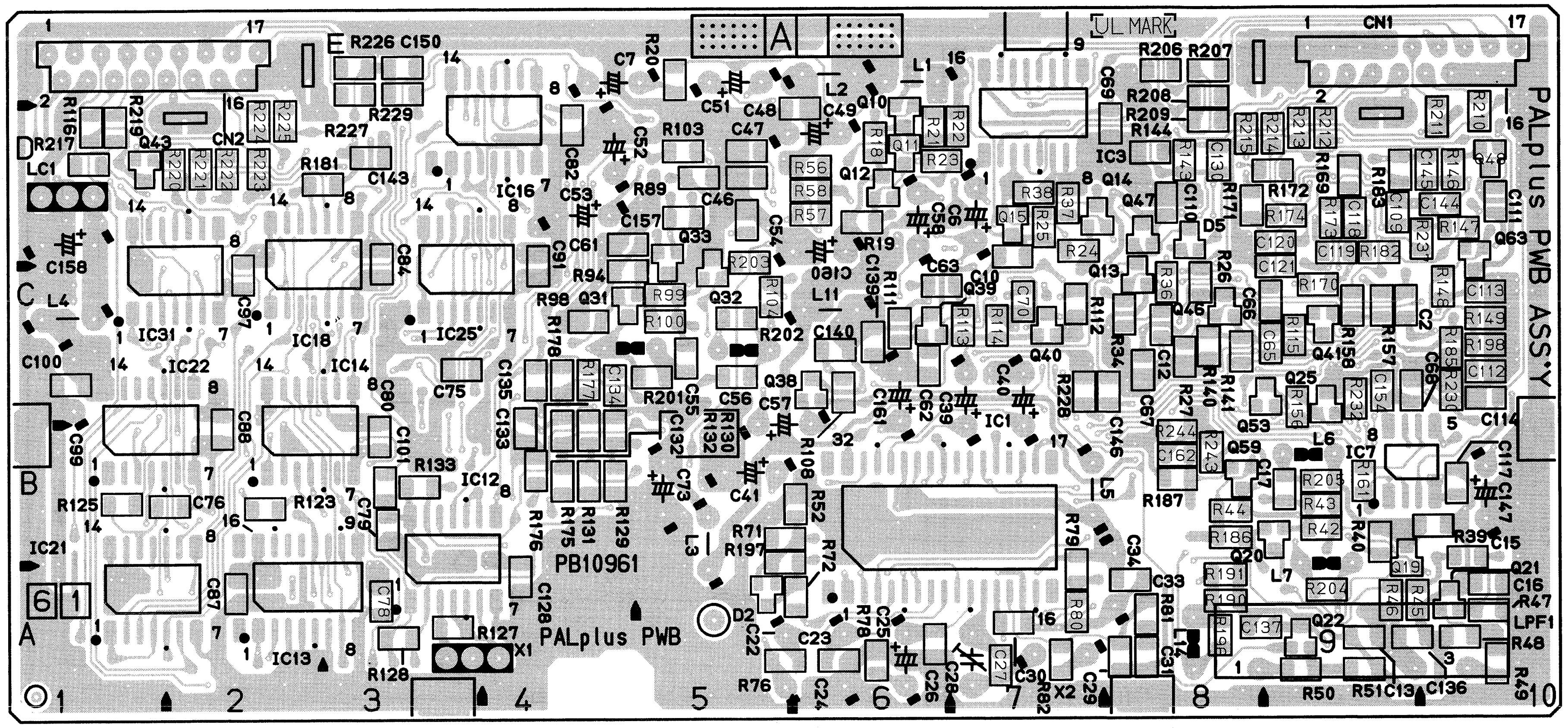
VOLTAGE CHART (for PAL PLUS PWB)

	REC	PB		REC	PB		REC	PB		REC	PB		REC	PB		REC	PB
IC1			**IC3**			15	3.2	3.2	4	2.5	2.3	6	0	5.2	10	0	0
1	2.9	2.8	1	1.7	1.7	16	5.1	5.1	5	2.5	2.4	7	0	0	11	0	0
2	1.6	1.6	2	2.7	2.7	**IC7**			6	2.2	2.4	8	1.0	1.0	12	0	0
3	2.4	2.4	3	0	1.8	1	2.8	3.0	7	0	0	9	1.0	1.0	13	0	0
4	2.8	2.7	4	2.7	2.6	2	2.8	0	8	0	1.6	10	4.2	4.2	14	5.1	5.1
5	3.0	3.1	5	2.6	2.6	3	1.4	1.4	9	3.6	3.6	11	4.2	4.2	**IC21**		
6	3.0	3.1	6	0	0	4	0	0	10	3.5	3.5	12	5.2	5.2	1	0	0
7	4.3	4.3	7	0	0	5	3.0	3.0	11	0	1.6	13	0	0	2	5.2	5.2
8	3.1	3.1	8	0	0	6	2.8	3.0	12	0	0.4	14	5.1	5.2	3	0	0
9	0	0	9	0	0	7	4.2	3.5	13	4.6	4.6	**IC17**			4	0	0
10	3.0	3.1	10	0	0	8	5.1	5.1	14	5.1	5.1	1	0	2.9	5	0	0
11	2.9	2.9	11	0	0	**IC8**			**IC13**			2	0	2.7	6	0	0
12	2.4	2.5	12	2.8	2.8	1	2.1	2.1	1	5.2	5.2	3	0	1.0	7	0	0
13	3.4	3.4	13	1.8	1.7	2	1.9	1.9	2	2.7	2.4	4	1.0	1.0	8	0	0
14	0	0	14	2.8	2.8	3	1.9	1.9	3	0	0	5	0	0	9	0	0
15	3.0	3.0	15	2.8	2.8	4	2.0	2.1	4	0	0	6	0	0	10	5.2	5.2
16	0	0	16	5.1	5.1	5	1.0	1.0	5	0	0	7	0	0	11	0	0
17	0	0	**IC4**			6	0	0	6	0	0	8	0	0	12	0	0
18	5.1	5.1	1	1.4	1.5	7	0	0	7	0	0	9	5.2	5.2	13	5.2	5.2
19	3.0	2.9	2	1.7	1.8	8	0	0	8	0	0	10	0	5.2	14	5.1	5.1
20	0.8	0.8	3	0	1.9	9	0	0	9	0	0	11	0	0	**IC22**		
21	4.3	4.3	4		1.8	10	1.4	1.4	10	5.2	5.2	12	1.7	1.6	1	0	0
22	2.1	2.6	5	1.7	1.8	11	3.0	3.0	11	0	0	13	0	0	2	0	0
23	2.1	2.1	6	0	0	12	0	0	12	0	0	14	1.7	1.6	3	0	0
24	4.2	4.2	7	0	0	13	0	0	13	0	0	15	2.4	2.6	4	0	0
25	2.3	2.3	8	0	0	14	5.0	5.1	14	0	0	16	5.2	5.2	5	5.2	5.1
26	2.8	2.8	9	0	0	**IC9**			15	0	0	**IC18**			6	5.2	5.1
27	5.1	5.1	10	0	4.3	1	0	4.1	16	5.1	5.1	1	5.2	5.2	7	0	0
28	5.1	5.1	11	5.1	5.2	2	0	2.2	**IC14**			2	5.2	5.2	8	5.2	5.1
29	2.9	3.0	12	1.7	1.5	3	0	2.6	1	0	0	3	0	0	9	5.2	5.1
30	3.0	3.1	13	2.3	2.4	4	5.1	5.1	2	5.2	5.1	4	5.1	5.2	10	5.2	5.1
31	2.4	2.4	14	2.3	2.4	5	1.9	1.9	3	5.2	5.1	5	5.1	5.2	11	0	0
32	4.2	4.2	15	1.7	1.5	6	2.2	2.2	4	5.2	5.1	6	0	0	12	5.2	5.1
IC2			16	5.0	5.1	7	0	2.2	5	0	0	7	0	0	13	0	0
1	0.8	0.8	**IC5**			8	3.9	3.9	6	5.2	5.2	8	5.2	5.2	14	5.1	5.1
2	0.8	0.8	1	0	2.5	9	0	0	7	0	0	9	0	0	**IC23**		
3	0.8	0.8	2	2.8	2.8	10	0	0	8	5.2	5.2	10	0	4.2	1	0	0
4	0	0	3	2.5	2.6	11	0	0	9	0	0	11	5.2	5.2	2	0	0
5	1.1	1.2	4	0	2.6	12	2.1	2.1	10	5.2	5.2	12	0	0	3	0	0
6	0	0	5	0	2.6	13	2.0	2.1	11	0	0	13	5.2	0	4	0	0
7	1.8	1.8	6	0	0	14	4.1	4.1	12	5.2	5.2	14	5.1	5.1	5	5.2	5.2
8	2.0	2.1	7	0	0	**IC11**			13	0	0	**IC19**			6	5.2	5.2
9	4.7	4.7	8	0	0	1	0	0	14	5.1	5.1	1	0	0	7	0	0
10	0	0	9	0	1.0	2	2.7	2.7	**IC15**			2	0	0	8	0	0
11	4.0	3.9	10	1.0	1.0	3	5.2	5.1	1	0	0	3	5.2	5.2	9	5.1	5.2
12	0	0	11	1.0	1.0	4	0	0	2	5.2	5.2	4	0	0	10	5.1	5.1
13	3.2	3.1	12	2.8	2.8	5	0	0	3	0	0	5	0	0	11	5.1	5.1
14	3.1	3.1	13	0	2.8	6	0	0	4	5.2	5.2	6	0	5.2	12	0	0
15	0	0	14	2.8	0	7	1.0	1.0	5	0	0	7	0	0	13	5.1	5.2
16	1.7	1.6	15	2.6	2.7	8	0	0	6	0	0	8	5.2	5.2	14	5.1	5.1
17	1.7	1.6	16	0	0	9	0	0	7	5.2	5.2	9	0	0	**IC24**		
18	5.2	5.2	**IC6**			10	0	0	8	0	0	10	5.2	5.2	1	5.1	5.2
19	2.0	2.0	1	3.2	3.2	11	5.2	5.2	9	0	5.2	11	5.2	5.2	2	0	0
20	2.0	2.0	2	2.6	2.5	12	4.2	4.2	10	5.2	5.2	12	0	0	3	5.2	5.2
21	2.0	2.0	3	0	3.0	13	3.5	3.5	11	0	0	13	0	0	4	5.2	5.2
22	0	0	4	0	3.0	14	1.0	1.0	12	0	0	14	5.1	5.1	5	0	0
23	0	0	5	3.0	0	15	5.2	5.1	13	0	0	**IC20**			6	5.2	5.2
24	2.4	2.4	6	0	0	16	5.2	5.1	14	0	0	1	0	0	7	0	0
25	2.7	2.7	7	0	0	17	0.5	0.4	15	0	0	2	0	0	8	5.2	5.2
26	2.0	2.0	8	0	0	18	5.2	5.1	16	5.1	5.1	3	5.1	5.2	9	0	0
27	2.7	2.7	9	0	4.2	19	5.2	5.1	**IC16**			4	5.1	5.2	10	5.1	5.2
28	4.7	4.6	10	0	5.2	20	5.2	5.1	1	0	0	5	5.2	5.2	11	0	0
29	0	0	11	0	4.2	**IC12**			2	5.1	5.2	6	0	0	12	5.2	5.2
30	0	0	12	2.6	2.6	1	2.7	2.7	3	5.1	5.2	7	0	0	13	0	0
31	1.2	1.2	13	2.6	2.5	2	2.7	2.7	4	0	0	8	5.1	5.2	14	5.1	5.1
32	1.2	1.2	14	2.6	2.6	3	0	2.5	5	5.1	4.2	9	1.6	1.6			

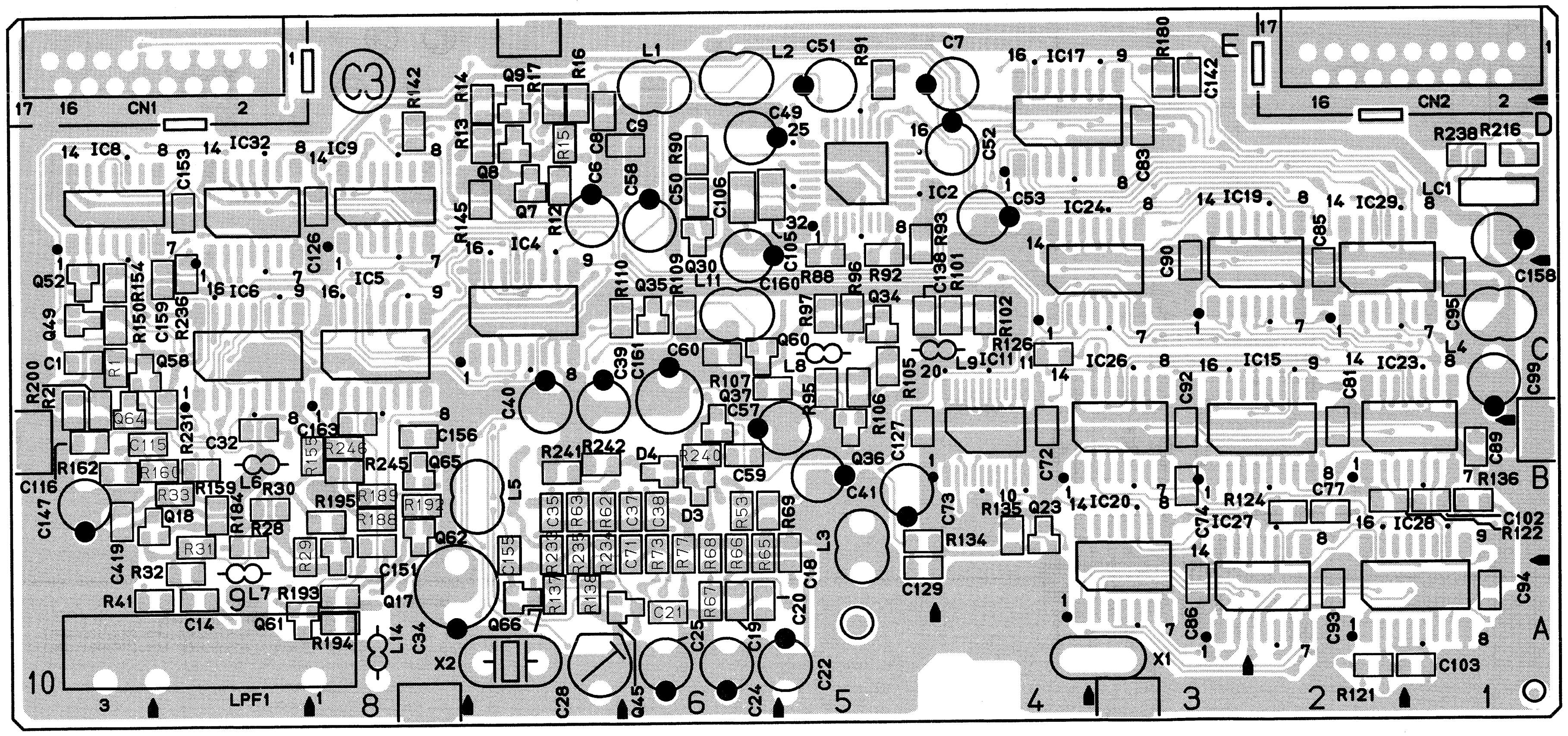
	REC	PB		REC	PB		REC	PB		REC	PB		REC	PB		REC	PB
IC25			6	5.2	5.2	**Q7**			**Q30**			**Q49**			**CN1**		
1	5.2	5.2	7	0	0	E	0	0	E	3.4	3.4	E	2.7	2.8	1	0	0
2	5.2	5.2	8	0	3.0	C	1.3	1.3	C	0	0	C	0	0	2	3.3	3.3
3	5.2	5.2	9	2.7	2.3	B	0.7	0.6	B	2.8	2.8	B	2.1	2.2	3	0	0
4	5.2	5.2	10	5.2	5.2	**Q8**			**Q31**			**Q52**			4	2.6	2.7
5	5.2	5.2	11	0.4	0.3	E	0.6	0.6	E	1.3	1.3	E	2.5	2.5	5	0	0
6	0	0	12	3.0	2.6	C	0	0	C	3.6	3.6	C	0	0	6	3.0	3.0
7	0	0	13	5.2	5.2	B	1.2	1.2	B	2.0	2.0	B	1.9	1.9	7	0	0
8	0	0	14	5.1	5.1	**Q9**			**Q32**			**Q53**			8	3.0	3.1
9	5.2	5.2	**IC31**			E	1.7	1.7	E	1.9	1.9	E	2.1	2.1	9	2.8	2.8
10	5.2	5.2	1	0	0	C	5.2	5.2	C	0	0	C	5.1	5.1	10	2.6	2.7
11	5.2	5.2	2	4.2	4.2	B	2.3	2.3	B	1.3	1.3	B	2.8	2.8	11	2.8	2.8
12	5.2	5.2	3	5.2	5.2	**Q10**			**Q33**			**Q58**			12	0	0
13	5.2	5.2	4	0	0	E	0	0	E	1.9	1.9	E	2.6	2.6	13	2.8	2.8
14	5.1	5.1	5	4.9	4.9	C	1.2	1.2	C	0	0	C	5.1	5.1	14	0	0
IC26			6	0	5.2	B	0.6	0.6	B	1.3	1.3	B	3.2	3.2	15	2.6	2.7
1	5.2	5.2	7	0	0	**Q11**			**Q34**			**Q59**			16	0	0
2	5.1	5.1	8	5.2	5.2	E	0.6	0.6	E	1.2	1.2	E	2.3	2.3	17	2.7	2.7
3	5.1	5.1	9	0	0	C	2.3	2.3	C	3.5	3.4	C	5.0	5.1	**CN2**		
4	5.1	5.1	10	5.2	5.2	B	1.2	1.2	B	1.9	1.9	B	2.9	2.9	1	5.2	5.2
5	5.1	5.2	11	5.2	5.2	**Q12**			**Q35**			**Q60**			2	4.8	4.8
6	0	0	12	5.2	5.2	E	1.7	1.7	E	3.0	3.0	E	1.5	1.5	3	0	0
7	0	0	13	0	0	C	5.2	5.2	C	0	0	C	5.1	5.1	4	5.2	5.2
8	5.1	5.2	14	5.1	5.1	B	2.3	2.3	B	2.3	2.3	B	2.1	2.1	5	5.2	5.2
9	0	0	**IC32**			**Q13**			**Q36**			**Q61**			6	3.8	3.8
10	5.2	5.2	1	4.2	4.1	E	0	0	E	1.9	1.9	E	1.8	1.8	7	4.0	3.9
11	0	0	2	0.5	0.4	C	1.2	1.2	C	0	0	C	0	0	8	0	0
12	1.7	1.6	3	0	4.9	B	0.6	0.6	B	1.3	1.3	B	1.3	1.3	9	2.6	2.4
13	0	0	4	0	0	**Q14**			**Q37**			**Q62**			10	2.5	2.5
14	5.1	5.1	5	0	0	E	0.6	0.6	E	2.3	2.3	E	1.3	1.3	11	0	4.2
IC27			6	5.1	5.1	C	2.3	2.3	C	5.1	5.1	C	3.7	3.7	12	0.4	0.4
1	0	0	7	0	0	B	1.2	1.2	B	2.4	2.3	B	2.0	2.0	13	0	0
2	1.6	1.6	8	0	0	**Q15**			**Q38**			**Q63**			14	1.9	1.9
3	0	0	9	5.2	5.2	E	1.7	1.7	E	1.7	1.7	E	1.9	1.9	15	0	0
4	5.2	5.2	10	0	0	C	5.1	5.2	C	5.1	5.1	C	5.0	5.1	16	0	0
5	0	0	11	0	5.2	B	2.3	2.3	B	2.3	2.3	B	2.5	2.5	17	2.0	2.4
6	5.2	5.2	12	0	0	**Q17**			**Q39**			**Q64**					
7	0	0	13	0	0	E	1.3	1.3	E	1.4	1.5	E	3.2	3.2			
8	5.2	5.2	14	5.1	5.1	C	3.6	3.7	C	5.0	5.1	C	0	0			
9	0	0				B	1.8	1.8	B	2.1	2.2	B	2.5	2.5			
10	5.2	5.2				**Q18**			**Q40**			**Q65**					
11	0	0				E	1.8	1.8	E	1.9	1.9	E	3.0	1.7			
12	1.7	1.6				C	0	0	C	0	0	C	5.1	5.1			
13	0	0				B	1.3	1.3	B	1.2	1.3	B	2.3	2.4			
14	5.1	5.1				**Q19**			**Q41**			**Q66**					
IC28						E	1.3	1.3	E	2.6	2.6	E	3.0	1.7			
1	5.2	5.2				C	3.3	3.3	C	5.1	5.1	C	5.1	5.1			
2	5.2	5.2				B	1.9	1.9	B	3.2	3.2	B	3.6	1.3			
3	0	0				**Q20**			**Q43**								
4	0	0				E	1.8	1.8	E	0	0						
5	0	0				C	0	0	C	3.8	3.8						
6	5.2	5.2				B	1.2	1.3	B	0	0						
7	0	0				**Q21**			**Q45**								
8	0	0				E	3.8	3.9	E	0	0						
9	5.2	5.2				C	5.0	5.1	C	3.6	0						
10	3.9	4.0				B	4.5	4.5	B	0	4.2						
11	5.2	5.2				**Q22**			**Q46**								
12	5.2	5.2				E	2.0	2.0	E	2.1	2.1						
13	5.2	5.2				C	0	0	C	5.1	5.1						
14	0	0				B	2.6	2.6	B	2.8	2.7						
15	0	5.2				**Q23**			**Q47**								
16	5.1	5.1				E	0	0	E	5.1	5.1						
IC29						C	4.7	4.7	C	0	0						
1	5.2	5.2				B	0.4	0.3	B	4.5	4.5						
2	0	0				**Q25**			**Q48**								
3	5.2	5.2				E	3.0	3.0	E	2.4	2.4						
4	5.2	5.2				C	0	0	C	5.1	5.1						
5	0	0				B	2.4	2.4	B	3.0	3.0						

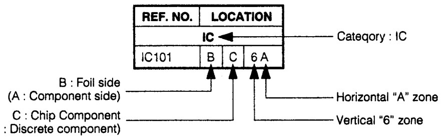
4.31 PAL PLUS CIRCUIT BOARD

–FOIL SIDE(B)–



–COMPONENT SIDE(A)–

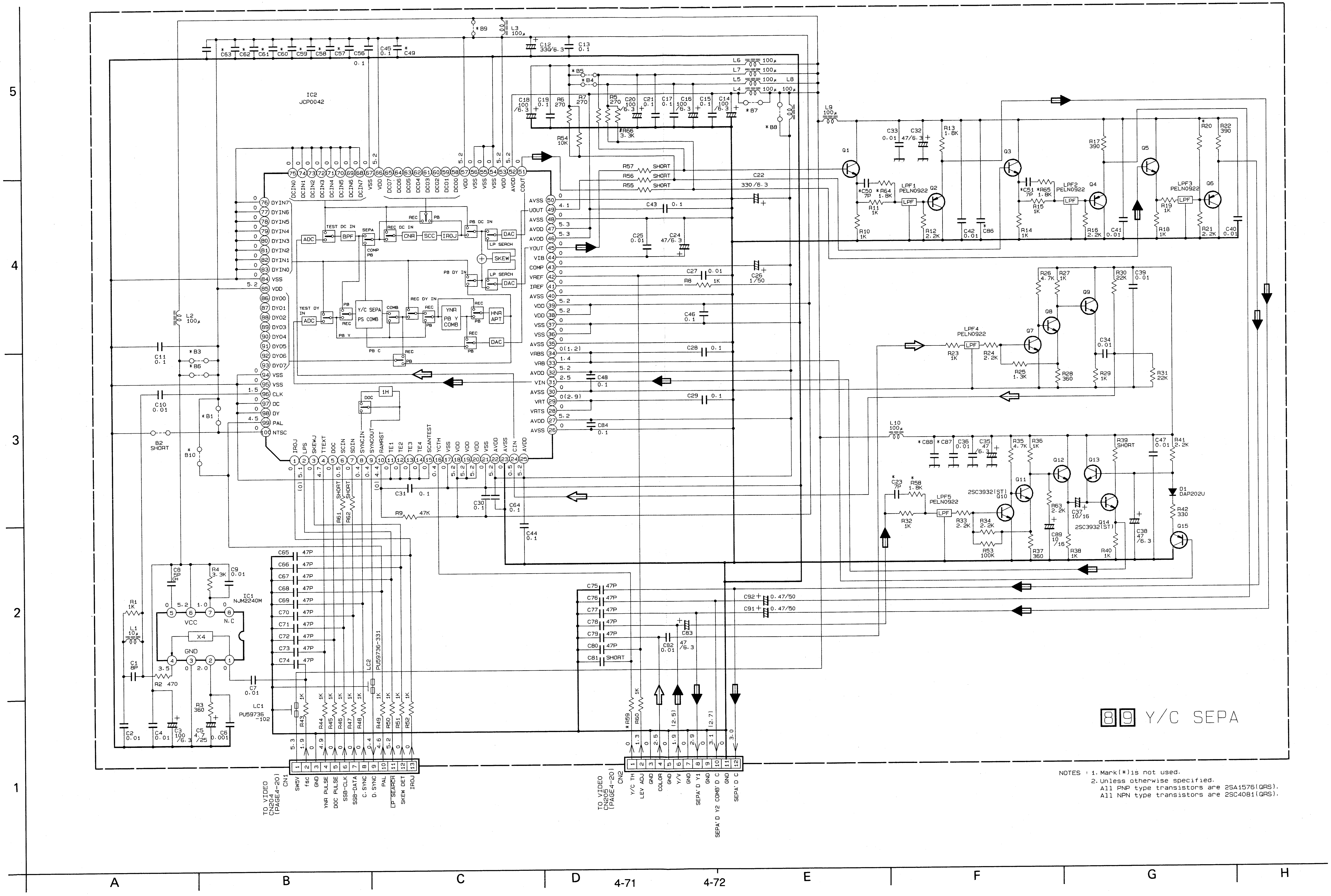




COMPONENT PARTS LOCATION GUIDE

REF.NO.	LOCATION		
CAPACITOR			
C1	A	C	1C
C2	B	C	1B
C6	A	D	4B
C7	A	D	7A
C8	A	C	4A
C9	A	C	4A
C10	B	C	4B
C12	B	C	3C
C13	B	C	2E
C14	A	C	2D
C15	B	C	1D
C16	B	C	1D
C17	B	C	2D
C18	A	C	5D
C19	A	C	5D
C20	A	C	5D
C21	A	C	5D
C22	A	D	5E
C23	B	C	5E
C24	A	D	5D
C25	A	D	5D
C26	B	C	4E
C27	B	C	4E
C28	A	D	4D
C29	B	C	3E
C30	B	C	4D
C31	B	C	3E
C32	A	C	2C
C33	B	C	3D
C34	A	D	3D
C35	A	C	4D
C37	A	C	4D
C38	A	C	5D
C39	A	D	4C
C40	A	D	4C
C41	A	D	5C
C46	B	C	6B
C47	B	C	6A
C48	B	C	5A
C49	A	D	5A
C50	A	C	5B
C51	A	D	6A
C52	A	D	7B
C53	A	D	7B
C54	B	C	6B
C55	B	C	6C
C56	B	C	6C
C57	A	D	6C
C58	A	D	5B
C59	A	C	5C
C60	A	C	5C
C61	B	C	6B
C62	B	C	5C
C63	B	C	4B
C65	B	C	2C
C66	B	C	2B
C67	B	C	3C
C68	B	C	1C
C69	B	C	3A
C70	B	C	4B
C71	A	C	4D
C72	A	C	7C
C73	A	D	6C
C74	A	C	8D
C75	B	C	8C
C76	B	C	9D
C77	A	C	9D
C78	B	C	8D
C79	B	C	8D
C80	B	C	8C
C81	A	C	9C
C82	B	C	7A
C83	A	C	8A
C84	B	C	8B
C85	A	C	9B
C86	A	C	8D
C87	B	C	9D
C88	B	C	9C
C89	A	C	10C
C90	A	C	8B
C91	B	C	7B
C92	A	C	8C
C93	A	C	9D
C94	A	C	10D
C95	A	C	10B
C97	B	C	9B
C99	A	D	10C
C100	B	C	10C
C101	B	C	8D
C102	A	C	10D
C103	A	C	9E
C105	A	C	5B
C106	A	C	5B
C109	B	C	2B
C110	B	C	3B
C111	B	C	1B
C112	B	C	1C
C113	B	C	1B
C114	B	C	1C
C115	A	C	1C
C116	A	C	1C
C117	B	C	1D
C118	B	C	2B
C119	B	C	2B
C120	B	C	2B
C121	B	C	2B
C126	A	C	2B
C127	A	C	6C
C128	B	C	7D
C129	A	C	6D
C130	B	C	3A
C132	B	C	7C
C133	B	C	7C
C134	B	C	7C
C135	B	C	7C
C136	B	C	1E
C137	B	C	2D
C138	A	C	6B
C139	B	C	5C
C140	B	C	5C
C142	A	C	8A
C143	B	C	8A
C144	B	C	1B
C145	B	C	1B
C146	B	C	3C
C147	A	D	1C
C150	B	C	8A
C151	A	C	3D
C153	A	C	2B
C154	B	C	2C
C155	A	C	4D
C156	A	C	3C
C157	B	C	6B
C158	A	D	10B
C159	A	C	1B
C160	A	D	5B
C161	A	D	5C
C162	B	C	3C
C163	A	C	3C
C419	A	C	1D
CONNECTOR			
CN1	A	D	2A
CN2	A	D	10A
DIODE			
D2	B	C	6D
D3	A	C	5D
D4	A	C	5C
D5	B	C	3B
IC			
IC1	B	C	4D
IC2	A	C	6B
IC3	B	C	4A
IC4	A	C	4B
IC5	A	C	3C
IC6	A	C	2C
IC7	B	C	1C
IC8	A	C	1B
IC9	A	C	3B
IC11	A	C	7C
IC12	B	C	8D
IC13	B	C	8D
IC14	B	C	8C
IC15	A	C	9C
IC16	B	C	7A
IC17	A	C	7A
IC18	B	C	8B
IC19	A	C	8B
IC20	A	C	8D
IC21	B	C	9D
IC22	B	C	9C
IC23	A	C	9C
IC24	A	C	7B
IC25	B	C	7B
IC26	A	C	8C
IC27	A	C	9D
IC28	A	C	9D
IC29	A	C	9B
IC31	B	C	9B
IC32	A	C	2B
COIL			
L1	A	D	5A
L2	A	D	5A
L3	A	D	6D
L4	A	D	10B
L5	A	D	3C
L6	A	D	2C
L7	A	D	2D
L8	A	D	6C
L9	A	D	7C
L11	A	D	5B
L14	A	D	3E
TRANSISTOR			
Q7	A	C	4B
Q8	A	C	4A
Q9	A	C	4A
Q10	B	C	5A
Q11	B	C	5A
Q12	B	C	5B
Q13	B	C	3B
Q14	B	C	3B
Q15	B	C	4B
Q17	A	C	3D
Q18	A	C	1D
Q19	B	C	1D
Q20	B	C	2D
Q21	B	C	1D
Q22	B	C	2E
Q23	A	C	7D
Q25	B	C	2C
Q30	A	C	5B
Q31	B	C	6B
Q32	B	C	6B
Q33	B	C	6B
Q34	A	C	6B
Q35	A	C	5B
Q36	A	C	6C
Q37	A	C	5C
Q38	B	C	5C
Q39	B	C	5C
Q40	B	C	4C
Q41	B	C	2C
Q43	B	C	10B
Q45	A	C	4D
Q46	B	C	3B
Q47	B	C	3B
Q48	B	C	1A
Q49	A	C	1B
Q52	A	C	1B
Q53	B	C	2C
Q58	A	C	1C
Q59	B	C	3D
Q60	A	C	5C
Q61	A	C	2D
Q62	A	C	3D
Q63	B	C	1B
Q64	A	C	1C
Q65	A	C	3C
Q66	A	C	4D
RESISTOR			
R1	A	C	1C
R2	A	C	1C
R12	A	C	4B
R13	A	C	4A
R14	A	C	4A
R15	A	C	4A
R16	A	C	4A
R17	A	C	4A
R18	B	C	5A
R19	B	C	5B
R20	B	C	6A
R21	B	C	4A
R22	B	C	4A
R23	B	C	4A
R24	B	C	4B
R25	B	C	4B
R26	B	C	3B
R27	B	C	3C
R28	A	C	2D
R29	A	C	2D
R30	A	C	2D
R31	A	C	2D
R32	A	C	2D
R33	A	C	2D
R34	B	C	3B
R36	B	C	3B
R37	B	C	4B
R38	B	C	4B
R39	B	C	1D
R40	B	C	2D
R41	A	C	1D
R42	B	C	2D
R43	B	C	2D
R44	B	C	3D
R45	B	C	1D
R46	B	C	2D
R47	B	C	1D
R48	B	C	1E
R49	B	C	1E
R50	B	C	2E
R51	B	C	2E
R52	B	C	5D
R53	A	C	5D
R56	B	C	5B
R57	B	C	5B
R58	B	C	5B
R62	A	C	4D
R63	A	C	4D
R65	A	C	5D
R66	A	C	5D
R67	A	C	5D
R68	A	C	5D
R69	A	C	5D
R71	B	C	5D
R72	B	C	5D
R73	A	C	5D
R76	B	C	5E
R77	A	C	5D
R78	B	C	5E
R79	B	C	4D
R80	B	C	4D
R81	B	C	3D
R82	B	C	4E
R88	A	C	6B
R89	B	C	6B
R90	A	C	5A
R91	A	C	6A
R92	A	C	6B
R93	A	C	6B
R94	B	C	6B
R95	A	C	6C
R96	A	C	6B
R97	A	C	6B
R98	B	C	7B
R99	B	C	6B
R100	B	C	6B
R101	A	C	7B
R102	A	C	7B
R103	B	C	6A
R104	B	C	6B
R105	A	C	6C
R106	A	C	6C
R107	A	C	5C
R108	B	C	5C
R109	A	C	5B
R110	A	C	4B
R111	B	C	5C
R112	B	C	4B
R113	B	C	4C
R114	B	C	4C
R115	B	C	2C
R116	B	C	10A
R121	A	C	9E
R122	A	C	9D
R123	B	C	9D
R124	A	C	9D
R125	B	C	10D
R126	A	C	7C
R127	B	C	8D
R128	B	C	8E
R129	B	C	7D
R130	B	C	7C
R131	B	C	7D
R132	B	C	7C
R133	B	C	8D
R134	A	C	6D
R135	A	C	7D
R136	A	C	10D
R137	A	C	4D
R138	A	C	4D
R140	B	C	3C
R141	B	C	3C
R142	A	C	3A
R143	B	C	3A
R144	B	C	3A
R145	A	C	4B
R146	B	C	1B
R147	B	C	1B
R148	B	C	1B
R149	B	C	1B
R150	A	C	1B
R154	A	C	1B
R155	A	C	2C
R156	B	C	2C
R157	B	C	2B
R158	B	C	2B
R159	A	C	2C
R160	A	C	1C
R161	B	C	2D
R162	A	C	1C
R169	B	C	2B
R170	B	C	2B
R171	B	C	2B
R172	B	C	2B
R173	B	C	2B
R174	B	C	2B
R175	B	C	7D
R176	B	C	7C
R177	B	C	7C
R178	B	C	7C
R180	A	C	8A
R181	B	C	8B
R182	B	C	2B
R183	B	C	2B
R184	A	C	2D
R185	B	C	1C
R186	B	C	3D
R187	B	C	3D
R188	A	C	3D
R189	A	C	3D
R190	B	C	3D
R191	B	C	3D
R192	A	C	3D
R193	A	C	3D
R194	A	C	3D
R195	A	C	3D
R196	B	C	3E
R197	B	C	5D
R198	B	C	1C
R200	A	C	1C
R201	B	C	6C
R202	B	C	6B
R203	B	C	6B
R204	B	C	2D
R205	B	C	2D
R206	B	C	3A
R207	B	C	3A
R208	B	C	3A
R209	B	C	3A
R210	B	C	1A
R211	B	C	1A
R212	B	C	2A
R213	B	C	2A
R214	B	C	2A
R215	B	C	2A
R216	A	C	10A
R217	B	C	10A
R219	B	C	10A
R220	B	C	9B
R221	B	C	9B
R222	B	C	9B
R223	B	C	9B
R224	B	C	9A
R225	B	C	9A
R226	B	C	8A
R227	B	C	8A
R228	B	C	4C
R229	B	C	8A
R230	B	C	1C
R231	A	C	1C
R232	B	C	2C
R233	A	C	4D
R234	A	C	4D
R235	A	C	4D
R236	A	C	2B
R237	B	C	1B
R238	A	C	10A
R240	A	C	5C
R241	A	C	4C
R242	A	C	4C
R243	B	C	3C
R244	B	C	3C
R245	A	C	3C
R246	A	C	3C
OTHERS			
LC1	A	D	10B
LPF1	A	D	2E
X1	A	D	8E
X2	A	D	4E

4.32 Y/C SEPA SCHEMATIC DIAGRAM

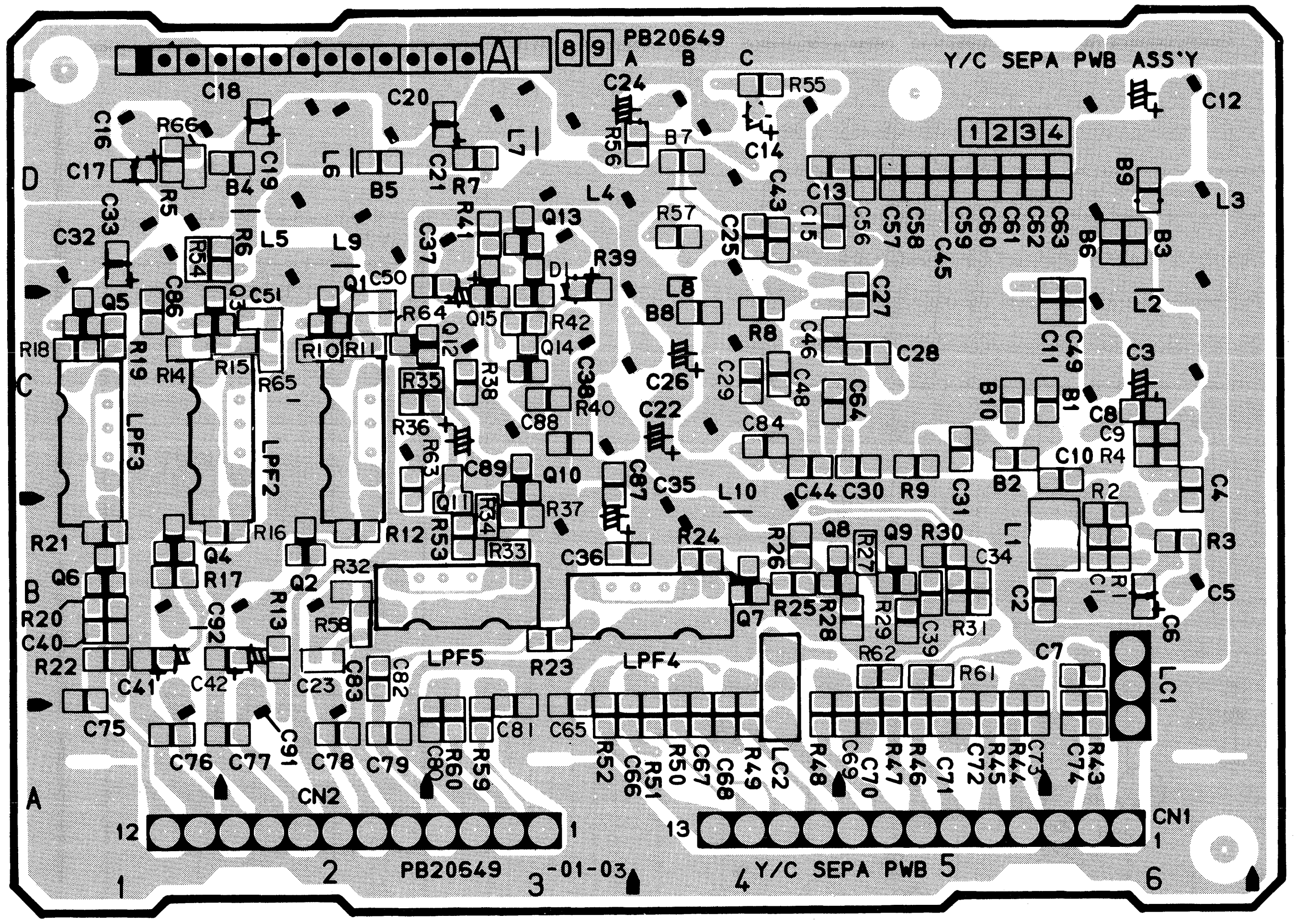


IC2
JCP0042
IC1
NJM2240M
X4
VCC
GND
N.C
LC1
PU59736-102
LC2
PU59736-331
L2 100µ
L3 100µ
L6 100µ
L7 100µ
L5 100µ
L4 100µ
L8
L9 100µ
L10 100µ
LPF1 PELN0922
LPF2 PELN0922
LPF3 PELN0922
LPF4 PELN0922
LPF5 PELN0922
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10 2SC3932(ST)
Q11
Q12
Q13
Q14 2SC3932(ST)
Q15
D1 DAP202U
Y/C SEPA PS COMB
YNR PB Y COMB
HNR APT
ADC
DAC
BPF
CNR
SCC
IROJ
SKEW
LP SEARCH
1H
DOC
B2 SHORT
CN1
TO VIDEO CN204 (PAGE4-20)
SW5V
fsc
GND
YNR PULSE
DOC PULSE
SSB-CLK
SSB-DATA
C.SYNC
D.SYNC
PAL
LP SEARCH
SKEW DET
IROJ
CN2
TO VIDEO CN205 (PAGE4-20)
Y/C TH
LEV ADJ
GND
COLOR
GND
Y/V
GND
SEPA'D Y1
GND
SEPA'D Y2 COMB'D C
GND
SEPA'D C
89 Y/C SEPA
A
B
C
D
E
F
G
H
1
2
3
4
5

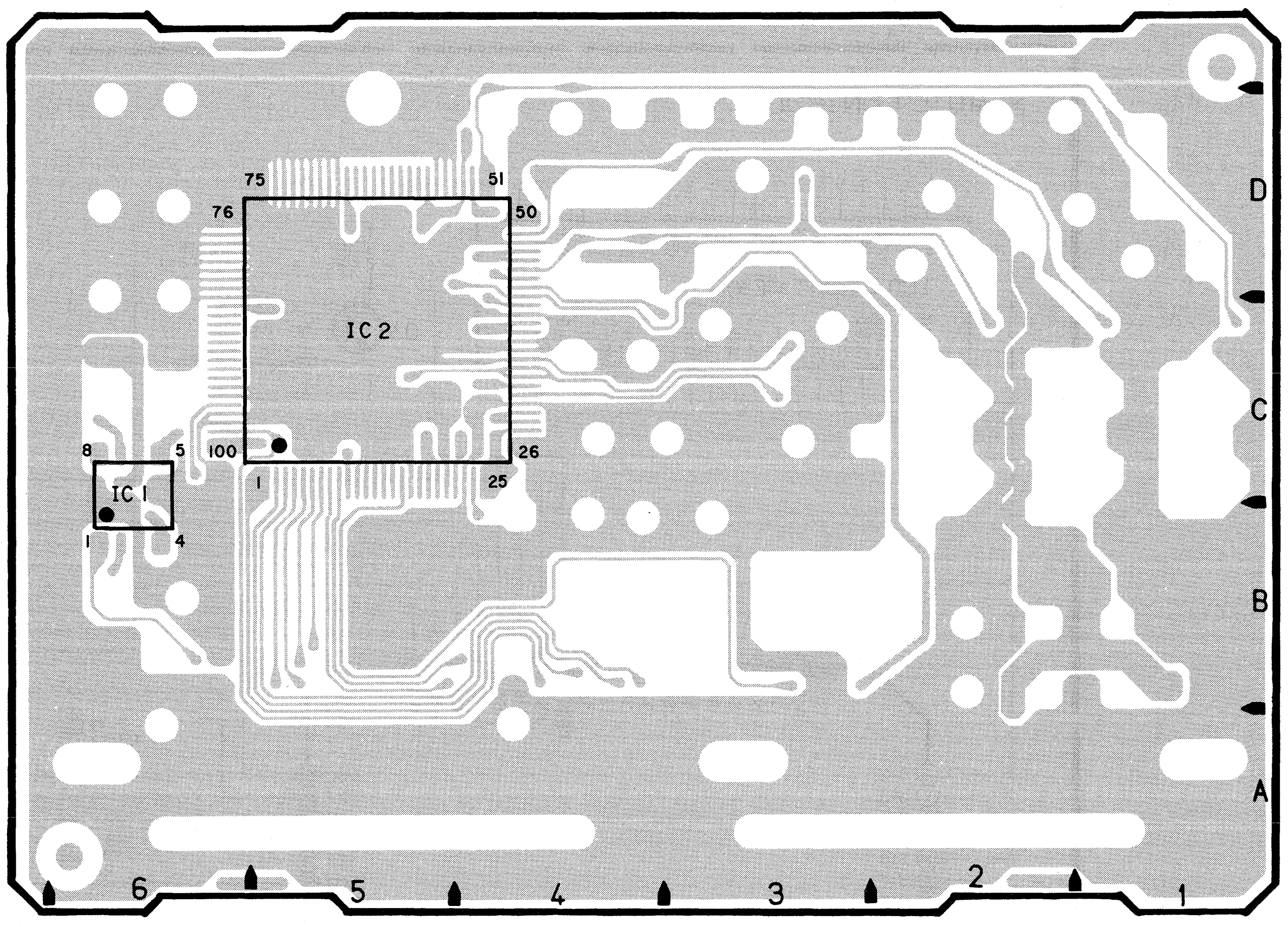
NOTES : 1. Mark(*)is not used.
2. Unless otherwise specified.
All PNP type transistors are 2SA1576(QRS).
All NPN type transistors are 2SC4081(QRS).

4.33 Y/C SEPA CIRCUIT BOARD

—FOIL SIDE (B)—

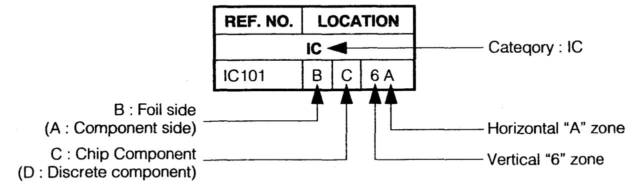

PB20649
A B C
Y/C SEPA PWB ASS'Y
1 2 3 4
8 9
CN1
CN2
12
13
1
PB20649 -01-03
Y/C SEPA PWB
LPF1
LPF2
LPF3
LPF4
LPF5
LC1
LC2
A
B
C
D
1
2
3
4
5
6

—CONPONENT SIDE (A)—


IC 2
IC 1
75
51
76
50
100
26
1
25
8
5
1
4
A
B
C
D
1
2
3
4
5
6

COMPONENT PARTS LOCATION GUIDE

REF.NO.	LOCATION		
CAPACITOR			
C1	B	C	6B
C2	B	C	6B
C3	A	D	6C
C4	B	C	6C
C5	A	D	6B
C6	B	C	6B
C7	B	C	6B
C8	B	C	6C
C9	B	C	6C
C10	B	C	6C
C11	B	C	6C
C12	A	D	6D
C13	B	C	4D
C14	A	D	4D
C15	B	C	4D
C16	A	D	1D
C17	B	C	1D
C18	A	D	2D
C19	B	C	2D
C20	A	D	2D
C21	B	C	3D
C22	A	D	3C
C23	B	C	2B
C24	A	D	3D
C25	B	C	4D
C26	A	D	4C
C27	B	C	5C
C28	B	C	5C
C29	B	C	4C
C30	B	C	5C
C31	B	C	5C
C32	A	D	1D
C33	B	C	1D
C34	B	C	5B
C35	A	D	3B
C36	B	C	3B
C37	A	D	3C
C38	A	D	3C
C39	B	C	5B
C40	B	C	1B
C41	B	C	1B
C42	B	C	2B
C43	B	C	4D
C44	B	C	4C
C45	B	C	5D
C46	B	C	4C
C47	B	C	3D
C48	B	C	4C
C49	B	C	6C
C50	B	C	2C
C51	B	C	2C
C56	B	C	5D
C57	B	C	5D
C58	B	C	5D
C59	B	C	5D
C60	B	C	5D
C61	B	C	5D
C62	B	C	5D
C63	B	C	6D
C64	B	C	4C
C65	B	C	3A
C66	B	C	3A
C67	B	C	4A
C68	B	C	4A
C69	B	C	5A
C70	B	C	5A
C71	B	C	5A
C72	B	C	5A
C73	B	C	5A
C74	B	C	6A
C75	B	C	1B
C76	B	C	1A
C77	B	C	2A
C78	B	C	2A
C79	B	C	2A
C80	B	C	3A
C81	B	C	3A
C82	B	C	2B
C83	A	D	2B
C84	B	C	4C
C86	B	C	1C
C87	B	C	3C
C88	B	C	3C
C89	A	D	3C
C91	A	D	2B
C92	A	D	1B
CONNECTOR			
CN1	A	D	4A
CN2	A	D	1A
DIODE			
D1	B	C	3D
IC			
IC1	A	C	6C
IC2	A	C	5C
COIL			
L1	B	C	6B
L2	A	D	6C
L3	A	D	6D
L4	A	D	4D
L5	A	D	1D
L6	A	D	2D
L7	A	D	3D
L8	A	D	4D
L9	A	D	2D
L10	A	D	4B
TRANSISTOR			
Q1	B	C	2C
Q2	B	C	2B
Q3	B	C	1C
Q4	B	C	1B
Q5	B	C	1C
Q6	B	C	1B
Q7	B	C	4B
Q8	B	C	5B
Q9	B	C	5B
Q10	B	C	3C
Q11	B	C	3C
Q12	B	C	2C
Q13	B	C	3D
Q14	B	C	3C
Q15	B	C	3D
RESISTOR			
R1	B	C	6B
R2	B	C	6B
R3	B	C	6B
R4	B	C	6C
R5	B	C	1D
R6	B	C	2D
R7	B	C	3D
R8	B	C	4C
R9	B	C	5C
R10	B	C	2C
R11	B	C	2C
R12	B	C	2B
R13	B	C	2B
R14	B	C	1C
R15	B	C	2C
R16	B	C	2B
R17	B	C	1B
R18	B	C	1C
R19	B	C	1C
R20	B	C	1B
R21	B	C	1B
R22	B	C	1B
R23	B	C	3B
R24	B	C	4B
R25	B	C	4B
R26	B	C	4B
R27	B	C	5B
R28	B	C	5B
R29	B	C	5B
R30	B	C	5B
R31	B	C	5B
R32	B	C	2B
R33	B	C	3B
R34	B	C	3B
R35	B	C	2C
R36	B	C	2C
R37	B	C	3B
R38	B	C	3C
R39	B	C	3D
R40	B	C	3C
R41	B	C	3D
R42	B	C	3C
R43	B	C	6A
R44	B	C	5A
R45	B	C	5A
R46	B	C	5A
R47	B	C	5A
R48	B	C	4A
R49	B	C	4A
R50	B	C	4A
R51	B	C	4A
R52	B	C	3A
R53	B	C	3B
R54	B	C	1D
R55	B	C	4D
R56	B	C	4D
R57	B	C	4D
R58	B	C	2B
R59	B	C	3A
R60	B	C	3A
R61	B	C	5B
R62	B	C	5B
R63	B	C	2C
R64	B	C	2C
R65	B	C	2C
R66	B	C	1D
R67	B	C	5C
R68	A	C	5B
OTHER			
LC1	A	D	6A
LC2	A	D	4A
LPF1	A	D	2C
LPF2	A	D	1C
LPF3	A	D	1C
LPF4	A	D	3B
LPF5	A	D	2B

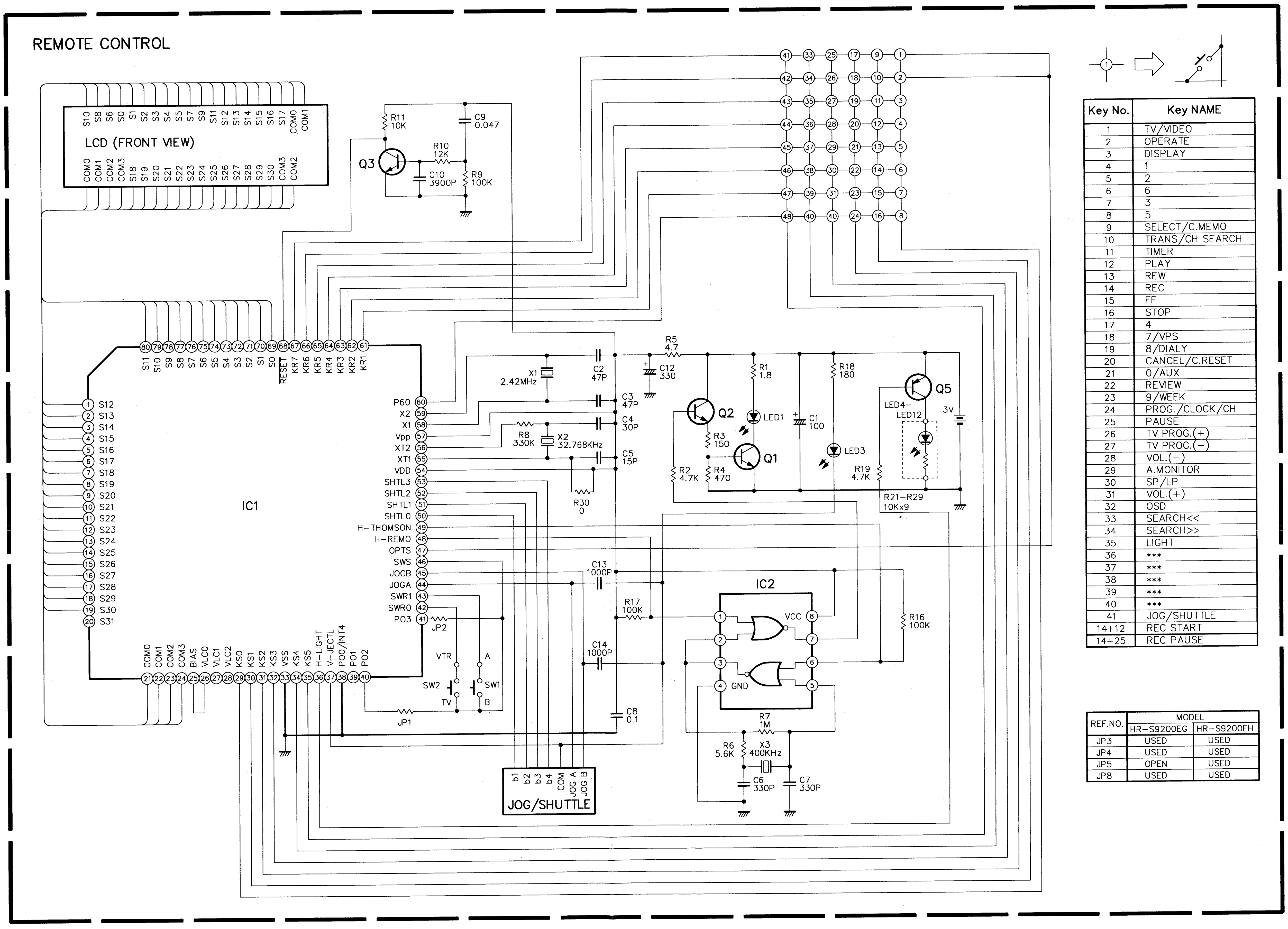


REF. NO.	LOCATION		
	IC		
IC101	B	C	6 A

Cateqory : IC
B : Foil side
(A : Component side)
C : Chip Component
(D : Discrete component)
Horizontal "A" zone
Vertical "6" zone

4.34 REMOTE CONTROL SCHEMATIC DIAGRAM

NOTE:
1. All parts shown in this schematic are critical for safety.
2. This schematic is only for reference.
Avoid replacing individual parts.
Replace the entire unit only.



REMOTE CONTROL
LCD (FRONT VIEW)
S10 S8 S6 S0 S1 S2 S3 S4 S5 S7 S9 S11 S12 S13 S14 S15 S16 S17 COM0 COM1
COM0 COM1 COM2 COM3 S18 S19 S20 S21 S22 S23 S24 S25 S26 S27 S28 S29 S30 COM3 COM2
Q3
R11 10K
C9 0.047
R10 12K
C10 3900P
R9 100K
IC1
S11 S10 S9 S8 S7 S6 S5 S4 S3 S2 S1 S0 RESET KR7 KR6 KR5 KR4 KR3 KR2 KR1
S12 S13 S14 S15 S16 S17 S18 S19 S20 S21 S22 S23 S24 S25 S26 S27 S28 S29 S30 S31
P60 X2 X1 Vpp XT2 XT1 VDD SHTL3 SHTL2 SHTL1 SHTL0 H-THOMSON H-REMO OPTS SWS JOGB JOGA SWR1 SWR0 PO3
COM0 COM1 COM2 COM3 BIAS VLC0 VLC1 VLC2 KS0 KS1 KS2 KS3 KS4 KS5 VSS H-LIGHT V-JECTL P00/INT4 P01 P02
X1 2.42MHz
C2 47P
C3 47P
C4 30P
R8 330K
X2 32.768KHz
C5 15P
R30 0
R5 4.7
C12 330
R1 1.8
R18 180
Q2
LED1
C1 100
R3 150
Q1
LED3
R2 4.7K
R4 470
R19 4.7K
Q5
LED4– LED12
3V
R21–R29 10Kx9
JP2
VTR
A
SW2
SW1
TV
B
JP1
C13 1000P
C14 1000P
C8 0.1
R17 100K
IC2
VCC
GND
R16 100K
R7 1M
R6 5.6K
X3 400KHz
C6 330P
C7 330P
b1 b2 b3 b4 COM JOG A JOG B
JOG/SHUTTLE

Key No.	Key NAME
1	TV/VIDEO
2	OPERATE
3	DISPLAY
4	1
5	2
6	6
7	3
8	5
9	SELECT/C.MEMO
10	TRANS/CH SEARCH
11	TIMER
12	PLAY
13	REW
14	REC
15	FF
16	STOP
17	4
18	7/VPS
19	8/DIALY
20	CANCEL/C.RESET
21	0/AUX
22	REVIEW
23	9/WEEK
24	PROG./CLOCK/CH
25	PAUSE
26	TV PROG.(+)
27	TV PROG.(−)
28	VOL.(−)
29	A.MONITOR
30	SP/LP
31	VOL.(+)
32	OSD
33	SEARCH<<
34	SEARCH>>
35	LIGHT
36	***
37	***
38	***
39	***
40	***
41	JOG/SHUTTLE
14+12	REC START
14+25	REC PAUSE

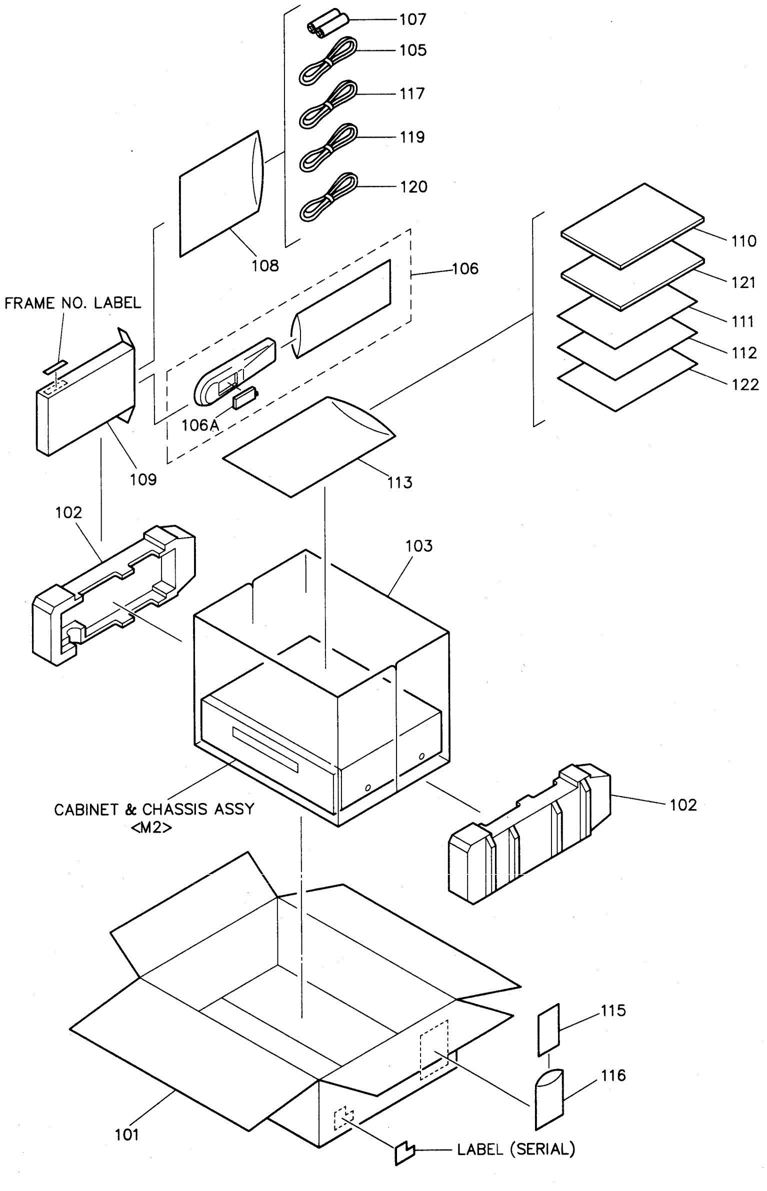
REF.NO.	MODEL	
	HR-S9200EG	HR-S9200EH
JP3	USED	USED
JP4	USED	USED
JP5	OPEN	USED
JP8	USED	USED

SECTION 5
PARTS LIST

SAFETY PRECAUTION

Parts identified by the ⚠ symbol are critical for safety. Replace only with specified part numbers.

5.1 PACKING AND ACCESSORY ASSEMBLY <M1>


107
105
117
119
120
108
106
FRAME NO. LABEL
110
121
111
112
122
106A
109
113
102
103
CABINET & CHASSIS ASSY
<M2>
102
115
116
101
LABEL (SERIAL)

****

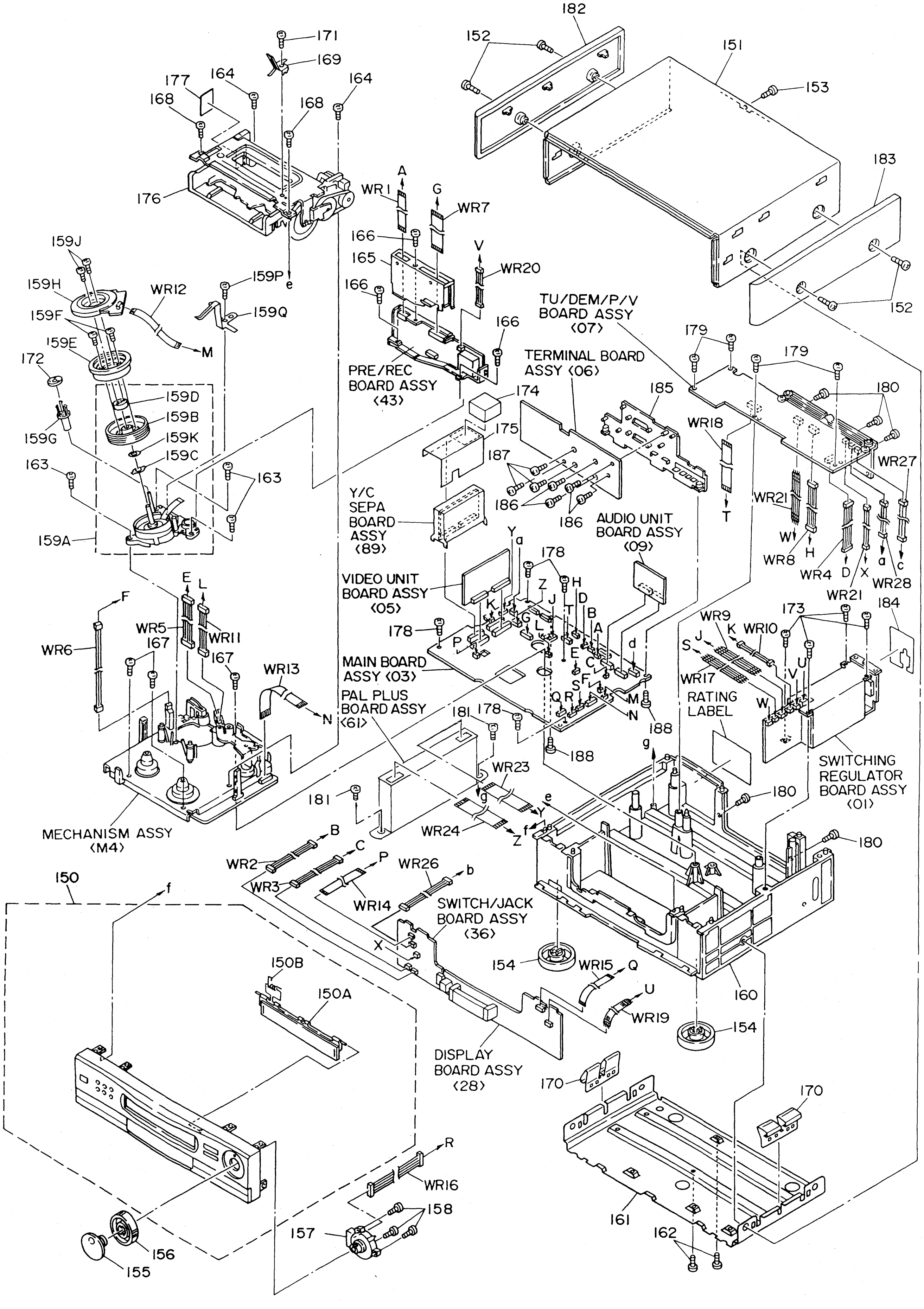
PACKING AND ACCESSORY ASSEMBLY <M1>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION
	101	PQ34865-7	PACKING CASE,S9200EG
		PQ34865-8	PACKING CASE,S9200EH
	102	PQ34700A-2	CUSHION ASSEMBLY
	103	PQM30021-95	POLY(FOAM)BAG
	105	PU59167-3	RF CABLE,S9200EH
⚠		PEAC0300	RF CABLE,S9200EG
⚠	106	PQ11525J-16	REMOTE CONTROLLER,S9200EG
⚠		PQ11525W	REMOTE CONTROLLER,S9200EH
	106A	PQ46034	CAP(BATTERY)
	107	R6PRPA-2ST	BATTERY,X2
	108	PQ35364	POLY BAG
	109	PQ34715-1-9	CASE,ACCESSORY
⚠	110	PU30425-1757	INSTRUCTIONS,S9200EH
⚠		PU30425-1760	INSTRUCTIONS,S9200EG
	111	PQ34978-15	SHEET(S.V.)
	112	PQ35231	SHEET(G.PROG.)
	113	PQ35364-4	POLY BAG
	115	BT-20135	WARRANTY CARD,S9200EG
	116	PQ33909	POLY BAG,S9200EG
⚠	117	QMP40E0-183	POWER CORD
	119	PU60111	S CABLE (S-VIDEO)
	120	PU56142-5	PIN CORD ASSEMBLY (AUDIO)
⚠	121	PU30425-1764	INSTRUCTIONS,S9200EH
	122	PQ45146-88	SHEET(SPAIN),S9200EH

5.2 CABINET AND CHASSIS ASSEMBLY <M2>

BEWARE OF BOGUS PARTS

Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine JVC parts be used.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WR12
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159Q
159F
159E
172
M
159D
159B
159G
159K
159C
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159A
A
WR1
G
WR7
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165
V
WR20
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PRE/REC
BOARD ASSY
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TU/DEM/P/V
BOARD ASSY
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TERMINAL BOARD
ASSY <06>
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WR18
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WR21
WR27
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SEPA
BOARD
ASSY
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AUDIO UNIT
BOARD ASSY
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WR8
WR4
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X
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c
WR28
WR21
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VIDEO UNIT
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BOARD ASSY
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LABEL
SWITCHING
REGULATOR
BOARD ASSY
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WR6
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WR13
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WR23
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Y
WR24
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Z
MECHANISM ASSY
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C
P
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WR3
WR26
b
WR14
150
f
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BOARD ASSY
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WR15
Q
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WR19
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DISPLAY
BOARD ASSY
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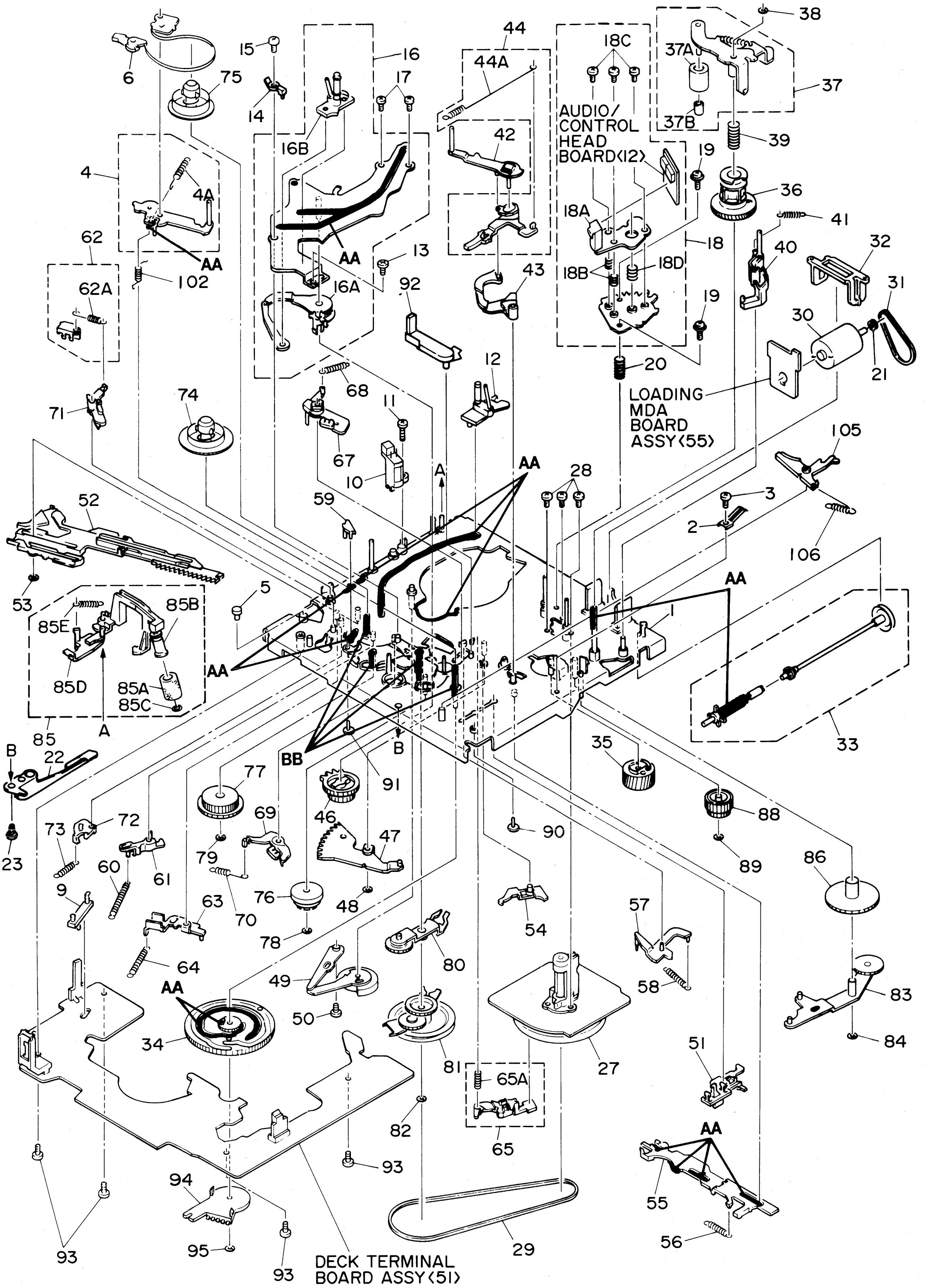
5.3 MECHANISM ASSEMBLY <M4>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AUDIO/
CONTROL
HEAD
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LOADING
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BOARD
ASSY<55>
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AA
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65A
82
65
AA
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93
DECK TERMINAL
BOARD ASSY<51>

Category	Part number	MARK
Grease	KANTO-G-31KAV	AA
Oil	COSMO-HV56	BB

NOTE: The section marked in AA and BB indicate lubrication and greasing areas.

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CABINET AND CHASSIS ASSEMBLY <M2>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION
	150	PQ11531AN	FRONT PANEL ASSEMBLY,S9200EH
		PQ11531AL	FRONT PANEL ASSEMBLY,S9200EG
	150A	PQ21560-19	CASSETTE HOUSING DOOR
	150B	PQ45704	TORSION SPRING
⚠	151	PQ11487-25	TOP COVER
	152	PQ46254	SPECIAL SCREW,X4 TOP COVER
	153	SDSF3010M	SCREW
	154	PQ45976A-2	FOOT ASSEMBLY,X2
	155	PQ34858H	KNOB(JOG) ASSEMBLY
	156	PQ34698-9	KNOB(SHUTTLE)
	157	PEME0757-03	JOG SHUTTLE ASSEMBLY
	158	SDSF2608Z	SCREW,X3 SHUTTLE
	159A	PDM2247F-10	DRUM SUB ASSEMBLY
	159B	PDM3353X-12	UPPER DRUM ASSEMBLY
	159C	PDM4400C	BRUSH ASSEMBLY
	159D	PDM4345A	COLLAR ASSEMBLY
	159E	PDZ0136-1-1	ROTOR ASSEMBLY
	159F	SPSH2660Z	SCREW,X2
	159G	PDM4300A-3	I.D.ROLLER ASSEMBLY
⚠	159H	PDZ0119-5	STATOR ASSEMBLY
	159J	SPSP2606Z	SCREW,X2
	159K	PDM4050-9	WASHER
	159P	PDM3372-1-4	EARTH PLATE
	159Q	SPSG2606Z	SCREW
⚠	160	PQ11479-1-7	BOTTOM CHASSIS
⚠	161	PQ11488-2-4	BOTTOM COVER
	162	SDSF3010Z	SCREW,X2 BOTTOM COVER
	163	SDST2612Z	SCREW,X3 DRUM
	164	SDST2610Z	SCREW,X2 CASSETT HOUSING
	165	PQ33877-1-1	SHIELD CASE(2),PRE/REC
	166	SDSG2606Z	SCREW,X3 PRE/REC
	167	PQ43831	SPECIAL SCREW,X3 MECH
	168	SDSF3008Z	SCREW,X2 CASSETTE HOUSING
	169	PQ46083-1-1	EARTH PLATE
	170	PQ34795	EARTH PLATE,X2 BOTTOM S9200EG
	171	SPST2604Z	SCREW,CASS HOUSING
	172	PQ45339-2-3	INERTIA PLATE
	173	SDSF3010Z	SCREW,X4 SW REG
	174	PQM30029-220	SPACER
	175	PQ35098	COVER(SHIELD)
	176	PUS29662C-1	CASSETTE HOUSING ASSY
	178	SDSF3010Z	SCREW,X4 MAIN
	179	SDSF3010Z	SCREW,X4 TUNER
	180	SDSF3010M	SCREW,X5 TERMINAL
	181	SDSF3010Z	SCREW,X2 PALPL
	182	PQ11516-2-5	SIDE PANEL
	183	PQ11517-2-5	SIDE PANEL
⚠	184	PQ34613-6	SHEET(BRACKET),S9200EG
⚠		PQ34613-2	SHEET(BRACKET),S9200EH
	185	PQ11595-3	TERMINAL BOARD(1),S9200EG
		PQ11595-2	TERMINAL BOARD(1),S9200EH
	186	SDSF3010Z	SCREW,X4 PERI
	187	SDSF3010Z	SCREW,X3 TERMINAL BOARD
	188	SDSF3010Z	SCREW,X2 MAIN BOARD
	WR1	PW30802-0928	FFC WIRE,CN1
	WR2	PW30504-03W5801	WIRE,CN4
	WR3	PW30504-03K6606	WIRE,CN5
	WR4	PW30504-05W3010	WIRE,CN6 S9200EG
		PW30504-07W3406	WIRE,CN6 S9200EH
	WR5	PW30504-04W2007	WIRE,CN101
	WR6	PW30504-02W5801	WIRE,CN102
	WR7	PW30802-1620	WIRE,CN201
	WR8	PW30504-06W2210	WIRE,CN208
	WR9	PW30603-07750	WIRE,CN209
	WR10	PW30349-0226009	WIRE,CN213
	WR11	PW30504-03W2801	WIRE,CN401
	WR12	PW30803-0438	FFC WIRE,CN402
	WR13	PW30802-1626	WIRE,CN601
	WR14	PW30803-0426	FFC WIRE,CN602
	WR15	PW30802-0826	WIRE,CN603
	WR16	PW30218-0833014	WIRE,CN604
	WR17	PW30603-05D20	WIRE,CN605
	WR18	PW30802-1422	RIBBON JUMPER,CN606
	WR19	PW30603-04932	WIRE,REG CN1
	WR20	PW30218-0335213	WIRE,REG CN2
	WR21	PW30604-04450	WIRE,REG CN4
	WR22	PW30375-0227210	WIRE,TU CN5
	WR23	PW30802-1720	WIRE,CN216
	WR24	PW30802-1740	WIRE,CN214
	WR25	PW30218-0226814	WIRE,CN215
	WR26	PW30504-06W5411	WIRE,TERM CN1
	WR27	PW30375-0222008	WIRE,TERM CN811
	WR28	PW30375-0221608	WIRE,TUNER CN9

* *

MECHANISM ASSEMBLY <M4>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION
	1	PQ11473B-6	MAIN DECK ASSEMBLY
	2	PQ43849	EARTH PLATE
	3	SPST2604Z	SCREW
	4	PQ45887A-4	TENSION ARM ASSEMBLY
	4A	PQ45373-1-4	TENSION SPRING
	5	PQ45374-1-2	ADJUST PIN
	6	PQ34629A	TENSION BAND ASSEMBLY
	9	PQ34631	SPRING BASE
	10	PEHE0287	FULL ERASE HEAD
	11	SDSF2614Z	SCREW,FE HEAD
	12	PQ34749C-7	POLE BASE ASSY(SUPPLY)
	13	SDST2608Z	SCREW
	14	PQ45444	STOPPER
	15	SPSF2006Z	SCREW
	16	PQ34619A-7	LOADING ASSY(TAKE UP)
	16A	PQ45286D-4	SPRING STAY ASSY
	16B	PQ34756A-2	POLE BASE ASSY(TAKE UP)
	17	SDSF2608Z	SCREW,X2
	18	PQ45355C-6	AUDIO CONTROL HEAD ARM ASSY
	18A	PEHE0262-01-03	AUDIO CONTROL HEAD
	18B	PQM30002-192	COMPRESSION SPRING,X2
	18C	PQ43687A	SPECIAL SCREW,X3
	18D	PQM30002-211	COMPRESSION SPRING
	19	SPSF2608M	SCREW,X2
	20	PQM30002-230	COMPRESSION SPRING
	21	PQ43546-1-2	MOTOR PULLEY
	22	PQ46099	CAPSTAN BRACKET
	23	SDST2606Z	SCREW
⚠	27	PU61313-3-2	CAPSTAN MOTOR
	28	SPSG2608Z	SCREW,X3
	29	PQM30003-27	BELT(CAPSTAN MOTOR)
⚠	30	PU60628-2	LOADING MOTOR
	31	PQM30003-28-14	BELT(MODE MOTOR)
	32	PQ34025-1-2	MOTOR HOLDER
	33	PQ45917A-1	WORM CLUTCH ASSEMBLY
	34	PQ11649-1-3	CONTROL CAM
	35	PQ34986	RELAY CAM
	36	PQ21481	PINCH ROLLER CAM
	37	PQ45921E	PINCH ROLLER ARM ASSY
	37A	PQ42007C-2	PINCH ROLLER ASSY
	37B	PQ43566	PINCH ROLLER CAP
	38	PQM30017-12	SLIT WASHER
	39	PQM30002-226	COMPRESSION SPRING
	40	PQ34564	PINCH ROLLER LEVER
	41	PQM30001-371-92	TENSION SPRING
	42	PQ45924C	GUIDE ARM ASSY
	43	PQ35140	ARM LEVER
	44	PQ45925B-4	SUB BRAKE ASSY(TAKE UP)
	44A	PQ46441	TENSION SPRING
	46	PQ34033	LOADING GEAR(TAKE UP)
	47	PQ46217A-1	ARM GEAR
	48	PQM30017-30	SLIT WASHER
	49	PQ45298C	LOADING GEAR ASSY(SUPPLY)
	50	PQ45913	SPECIAL SCREW
	51	PQ45399A-3	SLIDING BASE ASSY
	52	PQ11469-1-5	CONTROL PLATE
	53	PQM30017-46	SLIT WASHER
	54	PQ45402	RESET LEVER
	55	PQ21482-1-6	SLIDE PLATE
	56	PQM30001-377	TENSION SPRING
	57	PQ34569-1-3	IDLER CANCEL LEVER
	58	PQM30001-381	TENSION SPRING
	59	PQ34570-1-2	TAKE UP HEAD
	60	PQ46432	TENSION SPRING
	61	PQ34571-1-4	TAKE UP LEVER
	62	PQ45929A-3	SLIDER ASSY
	62A	PQ46003-1-5	TENSION SPRING
	63	PQ34572	REVERSE TENSION LEVER
	64	PQM30001-343-78	TENSION SPRING
	65	PQ45930A-5	CAPSTAN BRAKE ASSY
	65A	PQM30001-378	TENSION SPRING
	67	PQ45932B-6	MAIN BRAKE ASSY(TAKE UP)
	68	PQM30001-370	TENSION SPRING
	69	PQ45933A-1	MAIN BRAKE ASSY(SUPPLY)
	70	PQM30001-374	TENSION SPRING
	71	PQ34574	SUB BRAKE(SUPPLY)
	72	PQ45934-1-1	OFF LEVER
	73	PQM30001-383	TENSION SPRING
	74	PQ45935C	REEL DISK ASSY(TAKE UP)
	75	PQ45524A-4	REEL DISK ASSY(SUPPLY)
	76	PU61388-2	CLUTCH GEAR UNIT(TAKE UP)
	77	PU61389-1-3	CLUTCH GEAR UNIT(SUPPLY)
	78	PQM30017-7	SLIT WASHER
	79	PQM30017-7	SLIT WASHER
	80	PU61390	IDLER UNIT (D)
	81	PU61317-1-4	CENTER GEAR UNIT
	82	PQM30017-30	SLIT WASHER
	83	PQ45943A-4	DRIVE ARM ASSY
	84	PQM30017-47	SLIT WASHER
	85	PQ45561A-2	CLEANER ASSEMBLY
	85A	PQ44837-2	CLEANER
	85B	PQ45689	ROLLER
	85C	PQM30017-38	SLIT WASHER
	85D	PQ34047-1-2	LIMITTER LEVER
	85E	PQM30001-323	TENSION SPRING
	86	PQ45945	RELAY GEAR
	88	PQ45434	CASSETTE HOUSING GEAR
	89	PQM30017-47	SLIT WASHER
	90	PQ45439	S SWITCH PIN (S CASSETTE DET)
	91	PQ45981	C.SWITCH PIN
	92	PQ21488	LED GUIDE
	93	SDSF2608Z	SCREW,X4
	94	PU61322-1-2	ROTARY ENCODER
	95	PQM30017-49	SLIT WASHER
	102	PQ45768-1-3	TORSION SPRING (TENSION ARM)
	105	PQ46264A-1	SUB BRAKE ASSY(TAKE UP 2)
	106	PQM30001-396	TENSION SPRING

5.4 ELECTRICAL PARTS LIST

****

SWITCHING REGULATOR BOARD ASSY <01>

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
PWBA	PB20636A-01	SWITCH GRGULATOR BOARD ASSY	
IC1	FA5311P	IC	
IC2	BA10324A	IC	
	or LM324N	IC	
IC3	XRA10358	IC	
	or BA10358	IC	
	or LMT358N	IC	
IC4	XRA10358	IC	
	or BA10358	IC	
	or LMT358N	IC	
Q1	2SK1459-CB14	FE TRANSISTOR	
Q3	2SA933S	TRANSISTOR	
	or 2SA1267(YG)-TJK	TRANSISTOR	
Q4	2SD1913(RS)	TRANSISTOR	
Q5	2SD1913(RS)	TRANSISTOR	
	or 2SD2375(QP)	TRANSISTOR	
Q6	2SD1913(RS)	TRANSISTOR	
	or 2SD2375(QP)	TRANSISTOR	
Q7	DTA114ES	TRANSISTOR	
Q8	2SD1913(RS)	TRANSISTOR	
	or 2SD2375(QP)	TRANSISTOR	
D1	10E6-F2	DIODE	
D2	10E6-F2	DIODE	
D3	10E6-F2	DIODE	
D4	10E6-F2	DIODE	
D5	AG01	FR DIODE	
D6	AG01	FR DIODE	
D7	1SR153-200-T2	FR DIODE	
	or AU01Z	FR DIODE	
	or ERA18-02-T2	FR DIODE	
	or AU01Z	FR DIODE	
D8	RD20ES-T1B1	ZENER DIODE	
	or UZ20BSA	ZENER DIODE	
D9	1SS133	DIODE	
	or MA165	DIODE	
D10	MTZV5.1C	ZENER DIODE	
	or RD5.1ES-T1B3	ZENER DIODE	
	or UZ5.1BSC	ZENER DIODE	
	or RD5.1ES-T1B3	ZENER DIODE	
	or UZ5.1BSC	ZENER DIODE	
D11	AU01Z	FR DIODE	
	or ERA18-02-T2	FR DIODE	
D12	1SR153-200-T2	FR DIODE	
	or AU01Z	FR DIODE	
	or ERA18-02-T2	FR DIODE	
	or AU01Z	FR DIODE	
D13	AU01Z	FR DIODE	
	or ERA18-02-T2	FR DIODE	
	or 1SR153-200-T2	FR DIODE	
	or ERA18-02-T2	FR DIODE	
	or 1SR153-200-T2	FR DIODE	
D14	MA644	FR DIODE	
	or FCF06A20	FR DIODE	
	or FML-12S	FR DIODE	
	or YG901C2	FR DIODE	
	or FML-12S	FR DIODE	
	or YG901C2	FR DIODE	
D15	FMB-24	BARRIER DIODE	
	or F5KQ40B	BARRIER DIODE	
	or MA7D49	SB DIODE	
	or YG801C04	SB DIODE	
	or MA7D49	SB DIODE	
	or YG801C04	SB DIODE	
D16	1SR153-200-T2	FR DIODE	
	or ERA18-02-T2	FR DIODE	
	or AU01Z	FR DIODE	
	or ERA18-02-T2	FR DIODE	
D17	RD6.2ES-T1B1	ZENER DIODE	
	or MTZV6.2A	ZENER DIODE	
	or UZ6.2BSA	ZENER DIODE	
	or MTZV6.2A	ZENER DIODE	
D18	1SS133	DIODE	
	or MA165	DIODE	
D19	1SS133	DIODE	
	or MA165	DIODE	
D20	1SS133	DIODE	
	or MA165	DIODE	
D21	1SS133	DIODE	
	or MA165	DIODE	
D22	MTZ30AT-77	ZENER DIODE	
	or RD30ES-T1B1	ZENER DIODE	
	or UZ30BSA	ZENER DIODE	
	or RD30ES-T1B1	ZENER DIODE	
	or UZ30BSA	ZENER DIODE	
D24	11ES2	DIODE	
	or ERA15-02	DIODE	
D25	RD10ES-T1B1	ZENER DIODE	
	or MTZ10AT-77	ZENER DIODE	
D26	1SS133	DIODE	
	or MA165	DIODE	
D27	1SS133	DIODE	
	or MA165	DIODE	
D35	AU01Z	FR DIODE	
	or ERA18-02-T2	FR DIODE	
D36	1SS133	DIODE	
	or MA165	DIODE	
D37	MTZ33DT-77	ZENER DIODE	
	or RD33ES-T1B4	ZENER DIODE	
D38	MTZ33DT-77	ZENER DIODE	
	or RD33ES-T1B4	ZENER DIODE	
D39	RD4.7ES-T1B1	ZENER DIODE	
	or MTZV4.7A	ZENER DIODE	
	or UZ4.7BSA	ZENER DIODE	
	or MTZV4.7A	ZENER DIODE	
D40	11ES2	DIODE	
	or ERA15-02	DIODE	
D41	11ES2	DIODE	
	or ERA15-02	DIODE	
R3	QRD161J-184	RESISTOR	180kΩ,1/6W
R4	QRD161J-184	RESISTOR	180kΩ,1/6W
R5	QRD161J-104	RESISTOR	100kΩ,1/6W
R6	QRG029J-683G	OMF RESISTOR	68kΩ,2W
R7	QRG029J-473G	OMF RESISTOR	47kΩ,2W
R8	QRG01DJ-220X	OMF RESISTOR	22Ω,1W
R9	QRX014J-R22Z	MF RESISTOR	0.22Ω,1W
R10	QRD161J-102	RESISTOR	1kΩ,1/6W
R11	QRD161J-221	RESISTOR	220Ω,1/6W
R12	QRD161J-182	RESISTOR	1.8kΩ,1/6W

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	R13	QRD161J-682	RESISTOR	6.8kΩ,1/6W
⚠	R15	QRZ0077-4R7X	FUSIBLE RESISTOR	4.7Ω,1/4W
	R16	QRG02DJ-222X	OMF RESISTOR	2.2kΩ,2W
⚠	R17	QRZ0077-101X	FUSIBLE RESISTOR	100Ω,1/4W
	R18	QRD161J-222	RESISTOR	2.2kΩ,1/6W
	R19	QRD161J-182	RESISTOR	1.8kΩ,1/6W
	R20	QRD161J-182	RESISTOR	1.8kΩ,1/6W
	R21	QRD161J-332	RESISTOR	3.3kΩ,1/6W
	R22	QRD161J-393	RESISTOR	39kΩ,1/6W
	R23	QRD161J-681	RESISTOR	680Ω,1/6W
	R24	QRD161J-124	RESISTOR	120kΩ,1/6W
	R25	QRD161J-103	RESISTOR	10kΩ,1/6W
	R26	QRD161J-102	RESISTOR	1kΩ,1/6W
	R27	QRD161J-473	RESISTOR	47kΩ,1/6W
	R28	QRD161J-102	RESISTOR	1kΩ,1/6W
	R29	QRD161J-103	RESISTOR	10kΩ,1/6W
	R30	QRD161J-103	RESISTOR	10kΩ,1/6W
	R31	QRD161J-103	RESISTOR	10kΩ,1/6W
	R33	QRD161J-753	RESISTOR	75kΩ,1/6W
	R34	QVPA606-332Z	V RESISTOR,SWD 5V	
	R35	QRD161J-682	RESISTOR	6.8kΩ,1/6W
	R36	QRV144F-8451AY	CMF RESISTOR	8.45kΩ,1/4W
	R37	QRV144F-1022AY	CMF RESISTOR	10.2kΩ,1/4W
	R43	QRV144F-8451AY	CMF RESISTOR	8.45kΩ,1/4W
	R44	QRV144F-9761AY	CMF RESISTOR	9.76kΩ,1/4W
	R45	QRD161J-102	RESISTOR	1kΩ,1/6W
	R46	QRD161J-222	RESISTOR	2.2kΩ,1/6W
	R47	QRV144F-3011AY	RESISTOR	3.01kΩ,1/4W
	R48	QRV144F-1001A	CMF RESISTOR	1kΩ,1/4W
	R49	QRD161J-221	RESISTOR	220Ω,1/6W
	R51	QRD161J-103	RESISTOR	10kΩ,1/6W
	R52	QRD161J-103	RESISTOR	10kΩ,1/6W
	R55	QRD161J-102	RESISTOR	1kΩ,1/6W
	R56	QRD161J-222	RESISTOR	2.2kΩ,1/6W
	R57	QRD161J-103	RESISTOR	10kΩ,1/6W
	R58	QRD161J-681	RESISTOR	680Ω,1/6W
⚠	C1	QCZ9016-103M	CAPACITOR	0.01μF
⚠	C2	QFZ9022-683	F CAPACITOR	0.068μF
⚠	C3	QFZ9037-333	F CAPACITOR	0.033μF
⚠	C6	QCZ9026-471	CAPACITOR	470pF
⚠	C7	QCZ9026-222	CAPACITOR	0.0022μF
⚠	C8	QCZ9026-221	C.CAPACITOR	
	C9	QCZ0212-472	CAPACITOR	0.0047μF,1kV
	C11	QEGA1EM-336	E CAPACITOR	33μF,25V
	C12	PECA0738-107	E CAPACITOR	
	C14	QFLA1HJ-471Z	F CAPACITOR	470pF,50V
	C15	QFV11HJ-104AZ	F CAPACITOR	0.1μF,50V
	C16	QFV11HJ-683AZ	F CAPACITOR	0.068μF,50V
	C17	QFLA1HJ-472Z	F CAPACITOR	0.0047μF,50V
	C18	QETC1HM-474	E CAPACITOR	0.47μF,50V
	C20	QETC1CM-107	E CAPACITOR	100μF,16V
	C21	QEM91AM-107	E CAPACITOR	100μF,10V
	C22	QETC1JM-226	E CAPACITOR	22μF,63V
	C23	QEGB1EM-227	E CAPACITOR	220μF,25V
	C24	QEGB1CM-687	E CAPACITOR	680μF,16V
	C25	QEGB1AM-128	E CAPACITOR	1200μF,10V
	C26	QETC1VM-336	E CAPACITOR	33μF,35V
	C27	QFV11HJ-104AZ	F CAPACITOR	0.1μF,50V
	C28	QFLA1HJ-103Z	F CAPACITOR	0.01μF,50V
	C29	QFV11HJ-683AZ	F CAPACITOR	0.068μF,50V
	C30	QFV11HJ-104AZ	F CAPACITOR	0.1μF,50V
	C31	QETC1EM-227	E CAPACITOR	220μF,25V

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	C32	QETB1CM-108	E CAPACITOR	1000μF,16V
	C33	QETB1AM-108	E CAPACITOR	1000μF,10V
	C34	QETC1VM-336	E CAPACITOR	33μF,35V
	C35	QETC1CM-107	E CAPACITOR	100μF,16V
	C36	QETC0JM-107	E CAPACITOR	100μF,6.3V
	C37	QFLA1HJ-102Z	F CAPACITOR	0.001μF,50V
	C38	QETC0JM-107	E CAPACITOR	100μF,6.3V
	C39	QCZ0136-101Z	CAPACITOR	100pF,1kV
	C40	QFV11HJ-474AZ	F CAPACITOR	0.47μF,50V
	C42	QFLA1HJ-102Z	F CAPACITOR	0.001μF,50V
	C43	QFLA1HJ-102Z	F CAPACITOR	0.001μF,50V
	C44	QETC1EM-476	E CAPACITOR	47μF,25V
	C45	QETC1CM-106	E CAPACITOR	10μF,16V
	C46	QETC1EM-226	E CAPACITOR	22μF,25V
	C47	QETC1CM-106	E CAPACITOR	10μF,16V
	C48	QFLA1HJ-102Z	F CAPACITOR	0.001μF,50V
	C50	QEM91AM-107	E CAPACITOR	100μF,10V
	C52	QCZ0136-101Z	CAPACITOR	100pF,1kV
	L1	PELN0696-330KZ	COIL	33μH
	L2	PELN0696-330KZ	COIL	33μH
	L3	PU60944-330K	COIL	33μH
	L4	PU59152-100J	COIL	10μH
	K1	PELN0662-Z	FERRATE BEADS	
	K2	PELN0662-Z	FERRATE BEADS	
	K4	PELN0662-Z	FERRATE BEADS	
⚠	PC1	PC120FY9	PH COUPLER	
⚠	T1	PELN0986	SW TRANS	
⚠	BKT1	PQ46004	BRACKET,REG	
	ETH1	PQ44695	EARTH PLATE	
	ETH2	PQ46081-1-1	EARTH PLATE	
⚠	FC1	PEMC0965-Z	FUSE CLIP	
⚠	FC2	PEMC0965-Z	FUSE CLIP	
⚠	HS1	PQ46005	HEAT SINK(1),Q1	
⚠	HS2	PQ46006	HEAT SINK(2),D14 15 Q4 5 6	
	HS3	PQ46048	PLATE,X4 REG Q4 5 6 D15	
⚠	LF1	PELN0255	LINE FILTER	
⚠	LF2	PU61108	LINE FILTER	
	SCW1	SDST3006Z	SCREW,X5	
	SCW2	SDST3008Z	SCREW,X4	
	SCW3	SPSG3008M	SCREW,X2	
	SLD1	PQ21503-1-2	SHIELD CASE,REG	
	SLD2	PQ34638	SHIELD COVER,REC	
⚠	SLD3	PQ46005	H.SINK(1),Q1	
⚠	SLD4	PQ46006	H.SINK(2),D14 D15 Q4 Q5 Q6	
	SLD5	PQ46048	PLATE(REG),X4	
	SPC1	PQM30029-225	SPACER	
	SPC2	PU60010-2	SPACER	
	CN1	PU60910-104	CONNECTOR,(1-4)DISPLAY	
	CN2	PU59555-103	CONNECTOR,(1-3) PRE/REC	
	CN3	PU60910-107	CONNECTOR,(3-9)MAIN	
	CN4	PU60910-104	CONNECTOR,(1-4) TUNER/IF	
	CN5	PU60910-105	CONNECTOR,(1-5)MAIN	
	CN6	PU59555-102	CONNECTOR,(1-2) MAIN	
⚠	CN101	PEMC1067	AC INLET	
⚠	F1	QMF51E2-1R25	FUSE	T1.2A

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION

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MAIN BOARD ASSEMBLY <03>

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION
PWBA	PB10968B-01	MAIN BOARD ASSEMBLY,S9200EH
	PB10968A-01	MAIN BOARD ASSEMBLY,S9200EG
IC1	XRA15218N	IC
	or BA15218N	IC
IC2	XRA15218N	IC
	or BA15218N	IC
IC3	BA6138	IC
IC4	XRA15218	IC
	or BA15218	IC
IC5	MC14052BCP	IC
	or UPD4052BC	IC
IC6	XRA15218	IC
	or BA15218	IC
IC7	LA7151	IC,S9200EG
IC8	LA7151	IC,S9200EG
IC101	BA7795LS	IC
	or XRA7795LS	IC
IC201	BA7106LS	IC
	or XRA7106LS	IC
IC202	TC4S584F	IC
IC203	M62354FP	IC
IC205	TC7W02F	IC,S9200EG
IC206	TC7S04F	IC
IC207	BA226F	IC
IC208	MC74HC4066F	IC
	or TC74HC4066AF	IC
IC209	MC74HC74F	IC
	or TC74HC74AF	IC
IC301	M52363SP	IC
IC401	HD49780NT	IC
	or HD49780ANT	IC
IC451	BA7039	IC
	or XRA7039	IC
IC472	XRA10358	IC
	or UPC358C	IC
	or BA10358	IC
	or LM358P	IC
	or BA10358	IC
	or UPC358C	IC
	or LMT358N	IC
	or LM358P	IC
	or LMT358N	IC
IC473	XRU4011B	IC
	or MC14011BCP	IC
	or UPD4011BC	IC
	or MC14011BCP	IC
	or TC4011BP	IC
IC474	MC14161BCP	IC
	or UPD4161BC	IC
	or TC40161BP	IC
	or UPD4161BC	IC
	or TC40161BP	IC
IC601	HD6433927B06F	QFP IC (MCU)
IC602	M50255P	IC
IC603	CAT35C104P-041	IC
IC604	S-80728AN	IC
	or RE5VA28A	IC
IC605	TC7S14F	IC

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION
IC701	M37470M3-052SP	IC
Q1	2SC3311A	TRANSISTOR
Q2	2SD1450T	TRANSISTOR
Q3	2SC4081(QRS)	TRANSISTOR
Q4	2SC4081(QRS)	TRANSISTOR
Q5	2SC4081(QRS)	TRANSISTOR
Q6	2SC4081(QRS)	TRANSISTOR
Q7	DTA114ES	TRANSISTOR
Q101	DTC114WU	TRANSISTOR
Q102	DTC114WU	TRANSISTOR
Q103	2SA933S(RS)	TRANSISTOR
Q104	2SA933S(RS)	TRANSISTOR
Q105	2SA933S(RS)	TRANSISTOR
Q106	2SC4081(QRS)	TRANSISTOR
Q107	2SC4081(QRS)	TRANSISTOR
Q201	DTC144WU	TRANSISTOR
Q202	DTC144WU	TRANSISTOR
Q203	2SC4081(QRS)	TRANSISTOR
Q204	2SA1576(QRS)	TRANSISTOR
Q205	DTA144EU	TRANSISTOR
Q206	DTC144WU	TRANSISTOR
Q207	2SC4081(QRS)	TRANSISTOR
Q208	2SC4081(QRS)	TRANSISTOR
Q209	DTC144WU	TRANSISTOR
Q210	2SA1576(QRS)	TRANSISTOR
Q211	2SA1576(QRS)	TRANSISTOR
Q213	DTC144WU	TRANSISTOR
Q214	DTA144EU	TRANSISTOR
Q215	DTA144EU	TRANSISTOR
Q216	DTC144WU	TRANSISTOR
Q217	2SA1576(QRS)	TRANSISTOR
Q218	DTC144WU	TRANSISTOR
Q221	DTC144WU	TRANSISTOR
Q222	2SC4081(QRS)	TRANSISTOR
Q223	2SC4081(QRS)	TRANSISTOR
Q224	DTC144WU	TRANSISTOR
Q225	2SC4081(QRS)	TRANSISTOR
Q227	2SA1576(QRS)	TRANSISTOR
Q228	DTC144WU	TRANSISTOR
Q229	2SA1576(QRS)	TRANSISTOR
Q230	2SC4081(QRS)	TRANSISTOR
Q231	2SA1576(QRS)	TRANSISTOR
Q232	FMC2	TRANSISTOR
Q233	DTC144WU	TRANSISTOR
Q234	DTC144WU	TRANSISTOR
Q236	2SA1577(QR)	TRANSISTOR
Q237	2SC4097(QR)	TRANSISTOR
Q238	2SA1577(QR)	TRANSISTOR
Q239	2SC4097(QR)	TRANSISTOR,S9200EG
Q243	DTC144WU	TRANSISTOR
Q244	DTA144EU	TRANSISTOR
Q245	DTA144EU	TRANSISTOR
Q251	2SA1576(QRS)	TRANSISTOR
Q252	2SA1576(QRS)	TRANSISTOR
Q253	2SA1576(QRS)	TRANSISTOR
Q302	DTC144EU	TRANSISTOR
Q303	DTC144EU	TRANSISTOR
Q305	DTA143TU	TRANSISTOR
Q307	2SC4081(QRS)	TRANSISTOR
Q308	2SA1576(QRS)	TRANSISTOR

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION
Q309	2SC4081(QRS)	TRANSISTOR
Q310	2SC4081(QRS)	TRANSISTOR
Q311	2SA1576(QRS)	TRANSISTOR
Q312	DTA144EU	TRANSISTOR
Q313	DTC143EU	TRANSISTOR
Q314	2SC4081(QRS)	TRANSISTOR
Q315	2SA1576(QRS)	TRANSISTOR
Q316	2SC4081(QRS)	TRANSISTOR
Q472	DTC143TS	TRANSISTOR
Q601	DTC114EU	TRANSISTOR
Q602	DTC114TU	TRANSISTOR
Q603	2SB1256	TRANSISTOR
Q604	DTC114EU	TRANSISTOR
Q605	DTA114EU	TRANSISTOR
Q606	DTC114EU	TRANSISTOR
Q607	DTC124EU	TRANSISTOR
Q608	2SC4081(QRS)	TRANSISTOR
Q609	DTC124EU	TRANSISTOR
Q610	DTC114EU	TRANSISTOR
D1	MTZ2.0AT-77	ZENER DIODE
D2	MTZ12CT-77	ZENER DIODE
D3	1SS133	DIODE
	or 1N4148M	DIODE
	or MA165	DIODE
	or 1N4148M	DIODE
D11	1SS133	DIODE
	or 1N4148M	DIODE
	or MA165	DIODE
	or 1N4148M	DIODE
	or MA165	DIODE
D12	1SS133	DIODE
	or 1N4148M	DIODE
	or MA165	DIODE
	or 1N4148M	DIODE
	or MA165	DIODE
D101	DAN202U	DIODE
D102	DAN202U	DIODE
D103	DAN202U	DIODE
D104	RD6.2ES-T1B2	ZENER DIODE
	or MTZ6.2BT-77	ZENER DIODE
D201	RD5.1ES-T1B2	ZENER DIODE
	or UZ5.1BSB	ZENER DIODE
	or MTZV5.1B	ZENER DIODE
	or UZ5.1BSB	ZENER DIODE
D202	1SS355	DIODE
D203	DAP202U	DIODE
D204	DAP202U	DIODE
D205	DAN202U	DIODE
D206	1SS355	DIODE
D207	DAP202U	DIODE
D208	DAN202U	DIODE
D209	1SS133	DIODE
	or MA165	DIODE
	or 1N4148M	DIODE,S9200EH
D210	DAP202U	DIODE,S9200EG
D211	1SS133	DIODE
	or 1N4148M	DIODE
	or MA165	DIODE
	or 1N4148M	DIODE
D213	DAN202U	DIODE

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
D215	1SS133	DIODE	
	or MA165	DIODE	
	or 1N4148M	DIODE	
	or MA165	DIODE	
D216	DAN202U	DIODE	
D217	1SS355	DIODE	
D218	DAP202U	DIODE	
D219	DAP202U	DIODE	
D222	DAP202U	DIODE	
D301	1SS133	DIODE	
	or MA165	DIODE	
	or 1N4148M	DIODE	
D401	1SS133	DIODE	
	or 1N4148M	DIODE	
	or MA165	DIODE	
	or 1N4148M	DIODE	
D402	1SS133	DIODE	
	or MA165	DIODE	
	or 1N4148M	DIODE	
	or MA165	DIODE	
D403	1SS133	DIODE	
	or 1N4148M	DIODE	
	or MA165	DIODE	
	or 1N4148M	DIODE	
D477	1SS133	DIODE	
	or 1N4148M	DIODE	
	or MA165	DIODE	
D601	1SS133	DIODE	
	or MA165	DIODE	
	or 1N4148M	DIODE	
	or MA165	DIODE	
	or 1N4148M	DIODE	
D602	DAP202U	DIODE	
D604	1SS133	DIODE	
	or 1N4148M	DIODE	
	or MA165	DIODE	
D605	1SS133	DIODE	
	or MA165	DIODE	
	or 1N4148M	DIODE	
	or MA165	DIODE	
D606	1SS133	DIODE	
	or 1N4148M	DIODE	
	or MA165	DIODE	
	or 1N4148M	DIODE	
D607	11E2-T5	DIODE	
D608	11E2-T5	DIODE	
D609	11E2-T5	DIODE	
D610	11E2-T5	DIODE	
D611	1SS133	DIODE	
	or MA165	DIODE	
	or 1N4148M	DIODE	
	or MA165	DIODE	
D612	1SS355	DIODE	
D613	1SS355	DIODE	
D614	11E2-T5	DIODE	
R1	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R2	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R3	QRSA08J-331YN	RESISTOR	330Ω,1/10W
R4	QRSA08J-393YN	RESISTOR,S9200EG	39kΩ,1/10W
	QRSA08J-0R0Y	RESISTOR,S9200EH	0Ω,1/10W
R5	QRSA08J-183YN	RESISTOR,S9200EG	18kΩ,1/10W

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R6	QRSA08J-393YN	RESISTOR,S9200EG	39kΩ,1/10W
	QRSA08J-0R0Y	RESISTOR,S9200EH	0Ω,1/10W
R7	QRSA08J-183YN	RESISTOR,S9200EG	18kΩ,1/10W
R12	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R13	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R14	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
R15	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R16	QRSA08J-331YN	RESISTOR	330Ω,1/10W
R20	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R21	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R22	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R23	QRSA08J-331YN	RESISTOR	330Ω,1/10W
R24	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R25	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R26	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R27	QRSA08J-331YN	RESISTOR	330Ω,1/10W
R28	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R29	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R30	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
R31	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R32	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R33	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R34	QRSA08J-331YN	RESISTOR	330Ω,1/10W
R35	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R36	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R37	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R38	QRSA08J-331YN	RESISTOR	330Ω,1/10W
R39	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R40	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R41	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R42	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R43	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R44	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R45	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
R46	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R47	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
R50	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R51	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R52	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R53	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R54	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R55	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R56	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R57	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R60	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R61	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R62	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R63	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R64	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R65	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
R66	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R67	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
R68	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R69	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
R70	QRSA08J-473YN	RESISTOR,S9200EH	47kΩ,1/10W
	QRSA08J-101YN	RESISTOR,S9200EG	100Ω,1/10W
R71	QRSA08J-104YN	RESISTOR,S9200EG	100kΩ,1/10W
	QRSA08J-153YN	RESISTOR,S9200EH	15kΩ,1/10W
R72	QRSA08J-473YN	RESISTOR,S9200EH	47kΩ,1/10W
	QRSA08J-101YN	RESISTOR,S9200EG	100Ω,1/10W
R73	QRSA08J-104YN	RESISTOR,S9200EG	100kΩ,1/10W
	QRSA08J-153YN	RESISTOR,S9200EH	15kΩ,1/10W

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R74	QRSA08J-473YN	RESISTOR,S9200EH	47kΩ,1/10W
	QRSA08J-101YN	RESISTOR,S9200EG	100Ω,1/10W
R75	QRSA08J-104YN	RESISTOR,S9200EG	100kΩ,1/10W
	QRSA08J-153YN	RESISTOR,S9200EH	15kΩ,1/10W
R76	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R77	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R78	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
R79	QRSA08J-101YN	RESISTOR,S9200EG	100Ω,1/10W
	QRSA08J-473YN	RESISTOR,S9200EH	47kΩ,1/10W
R80	QRSA08J-153YN	RESISTOR,S9200EH	15kΩ,1/10W
	QRSA08J-104YN	RESISTOR,S9200EG	100kΩ,1/10W
R81	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R82	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R83	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R85	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R101	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R102	QRD161J-221	RESISTOR	220Ω,1/6W
R103	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R105	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R106	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R107	QRSA08J-331YN	RESISTOR	330Ω,1/10W
R108	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
R109	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R110	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R111	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R112	QRSA08J-274YN	RESISTOR	270kΩ,1/10W
R113	QRSA08J-680YN	RESISTOR	68Ω,1/10W
R114	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
R115	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
R116	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R117	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
R118	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R120	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R121	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R122	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R123	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R124	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
R125	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R126	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
R127	QRSA08J-820YN	RESISTOR	82Ω,1/10W
R128	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R129	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R130	QRSA08J-3R3YN	RESISTOR	3.3Ω,1/10W
R131	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R132	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R133	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R134	QRSA08J-151YN	RESISTOR	150Ω,1/10W
R135	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R136	QRSA08J-3R3YN	RESISTOR	3.3Ω,1/10W
R137	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
R138	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R139	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
R140	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R141	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R142	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R201	QRG02DJ-102X	OMF RESISTOR	1kΩ,2W
R202	QRSA08J-914YN	RESISTOR	910kΩ,1/10W
R203	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R204	QRD161J-273	RESISTOR	27kΩ,1/6W
R205	QRD161J-103	RESISTOR	10kΩ,1/6W
R206	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R207	QRSA08J-911YN	RESISTOR	910Ω,1/10W

#△ REF No.	PART No.	PART NAME, DESCRIPTION	
R208	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R209	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R210	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R211	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R212	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R213	NRVA62D-122N	RESISTOR	1.2kΩ,1/16W
R214	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R215	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R216	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R217	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R218	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R219	QRSA08J-623YN	RESISTOR	62kΩ,1/10W
R220	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R221	QRSA08J-623YN	RESISTOR	62kΩ,1/10W
R222	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R223	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R224	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R225	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R226	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R227	NRVA62D-910N	RESISTOR	91Ω,1/16W
R228	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R229	QRSA08J-910YN	RESISTOR	91Ω,1/10W
R230	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R231	QRSA08J-681YN	RESISTOR	680Ω,1/10W
R232	QRSA08J-751YN	RESISTOR	750Ω,1/10W
R233	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R235	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R236	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R237	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R238	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R240	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R243	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R245	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R246	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R248	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R249	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R250	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R252	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R254	QRSA08J-681YN	RESISTOR,S9200EH	680Ω,1/10W
	QRSA08J-561YN	RESISTOR,S9200EG	560Ω,1/10W
R255	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R258	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R260	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R261	QRSA08J-274YN	RESISTOR	270kΩ,1/10W
R262	NRVA62D-102N	RESISTOR	1kΩ,1/16W
R263	QRSA08J-475YN	RESISTOR	4.7MΩ,1/10W
R264	NRVA62D-681N	RESISTOR,S9200EH	680Ω,1/16W
	QRSA08J-561YN	RESISTOR,S9200EG	560Ω,1/10W
R266	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R267	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R268	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R269	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R270	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R271	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R272	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
R273	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R274	QRD123J-331SX	RESISTOR	330Ω,1/2W
R275	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R276	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R277	QRSA08J-752YN	RESISTOR	7.5kΩ,1/10W
R278	QRSA08J-512YN	RESISTOR	5.1kΩ,1/10W
R279	QRSA08J-223YN	RESISTOR	22kΩ,1/10W

#△ REF No.	PART No.	PART NAME, DESCRIPTION	
R280	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R281	QRSA08J-103YN	RESISTOR,S9200EG	10kΩ,1/10W
R282	QRSA08J-391YN	RESISTOR,S9200EG	390Ω,1/10W
R283	QRSA08J-750YN	RESISTOR,S9200EG	75Ω,1/10W
R284	QRSA08J-821YN	RESISTOR	820Ω,1/10W
R285	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R286	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R287	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
R288	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R289	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R290	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R291	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R292	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R295	QRSA08J-222YN	RESISTOR,S92OOEH	2.2kΩ,1/10W
	QRSA08J-681YN	RESISTOR,S9200EG	680Ω,1/10W
R296	QRSA08J-222YN	RESISTOR,S9200EH	2.2kΩ,1/10W
	QRSA08J-681YN	RESISTOR,S9200EG	680Ω,1/10W
R297	QRSA08J-222YN	RESISTOR,S9200EH	2.2kΩ,1/10W
	QRSA08J-681YN	RESISTOR,S9200EG	680Ω,1/10W
R298	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R301	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R302	QRSA08J-391YN	RESISTOR	390Ω,1/10W
R303	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R304	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R305	QRSA08J-361YN	RESISTOR,S9200EH	360Ω,1/10W
	QRSA08J-271YN	RESISTOR,S9200EG	270Ω,1/10W
R306	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R307	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R308	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R309	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R310	QRSA08J-751YN	RESISTOR	750Ω,1/10W
R311	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R312	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R314	QRSA08J-681YN	RESISTOR	680Ω,1/10W
R315	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R316	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R317	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R318	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R320	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R321	QRSA08J-203YN	RESISTOR	20kΩ,1/10W
R322	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
R323	QRSA08J-133YN	RESISTOR	13kΩ,1/10W
R324	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R326	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
R327	QRSA08J-621YN	RESISTOR	620Ω,1/10W
R328	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R329	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R330	QRSA08J-391YN	RESISTOR	390Ω,1/10W
R331	QRSA08J-621YN	RESISTOR	620Ω,1/10W
R332	QRSA08J-201YN	RESISTOR	200Ω,1/10W
R333	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R334	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
R335	QRSA08J-203YN	RESISTOR	20kΩ,1/10W
R336	QRSA08J-390YN	RESISTOR	39Ω,1/10W
R337	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R339	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R341	QRSA08J-431YN	RESISTOR	430Ω,1/10W
R342	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R401	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R402	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R403	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
R404	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R405	QRSA08J-274YN	RESISTOR	270kΩ,1/10W
R406	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R407	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R408	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R409	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R410	QRSA08J-683YN	RESISTOR	68kΩ,1/10W
R411	QRSA08J-225YN	RESISTOR	2.2MΩ,1/10W
R412	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R413	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R414	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R415	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R416	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R417	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R418	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
R419	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R421	QRSA08J-394YN	RESISTOR	390kΩ,1/10W
R423	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
R424	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R429	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R430	QRSA08J-475YN	RESISTOR	4.7MΩ,1/10W
R431	QRSA08J-474YN	RESISTOR	470kΩ,1/10W
R432	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
R436	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R438	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R445	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R448	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R449	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
R451	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R452	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R453	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R454	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R455	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R456	QRSA08J-124YN	RESISTOR	120kΩ,1/10W
R485	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R601	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R602	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R603	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R604	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R605	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R606	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R607	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R608	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R609	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R610	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R611	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R612	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R613	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R614	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R615	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R616	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R617	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
R618	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R619	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R620	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R621	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R622	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R623	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R624	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R625	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R626	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R627	QRSA08J-681YN	RESISTOR	680Ω,1/10W
R628	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R629	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R630	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R631	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R632	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R633	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R634	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R635	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R636	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R637	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R638	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R639	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R640	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R641	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R642	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R643	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R644	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R645	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R646	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R647	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R648	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R649	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R650	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R651	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R652	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R653	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R654	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R655	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R656	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R657	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R658	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R659	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R660	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R661	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R662	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R663	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R664	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R665	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R666	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R667	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R668	QRSA08J-683YN	RESISTOR	68kΩ,1/10W
R669	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R670	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R671	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R672	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R673	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R674	QRSA08J-331YN	RESISTOR	330Ω,1/10W
R675	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R676	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R677	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R678	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R679	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R680	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R682	QRSA08J-303YN	RESISTOR	30kΩ,1/10W
R683	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R684	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
R685	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
R686	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R687	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R688	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R689	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R690	QRSA08J-224YN	RESISTOR	220kΩ,1/10W
R691	QRSA08J-104YN	RESISTOR	100kΩ,1/10W

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R692	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R693	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R694	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R695	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R696	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R698	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R699	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R701	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R702	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R703	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R704	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
R705	QRSA08J-681YN	RESISTOR	680Ω,1/10W
R706	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R707	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R708	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R709	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R710	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R711	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R712	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R713	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R714	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R715	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R716	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R717	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R718	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R719	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R720	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R721	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R722	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R723	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R724	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R725	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R726	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R727	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R728	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R901	QRD161J-0R0	RESISTOR	0Ω,1/6W
C1	QETC1CM-476	E CAPACITOR	47μF,16V
C2	QETC1CM-476	E CAPACITOR	47μF,16V
C3	QETC1CM-106	E CAPACITOR,S9200EG	10μF,16V
	QETC1HM-106	E CAPACITOR,S9200EH	10μF,50V
C4	QETC1HM-106	E CAPACITOR,S9200EH	10μF,50V
	QETC1CM-106	E CAPACITOR,S9200EG	10μF,16V
C7	QETC1CM-106	E CAPACITOR,S9200EG	10μF,16V
C8	QETC1CM-106	E CAPACITOR,S9200EG	10μF,16V
C9	QETC1CM-476	E CAPACITOR,S9200EG	47μF,16V
C10	QETC1CM-476	E CAPACITOR,S9200EG	47μF,16V
C11	QETC1CM-106	E CAPACITOR,S9200EG	10μF,16V
C12	QETC1CM-106	E CAPACITOR,S9200EG	10μF,16V
C16	QCTA1CH-102	CAPACITOR,S9200EH	0.001μF,16V
	QCSA1HJ-102	CAPACITOR,S9200EG	0.001μF,50V
C17	QCSA1HJ-102	CAPACITOR,S9200EG	0.001μF,50V
	QCTA1CH-102	CAPACITOR,S9200EH	0.001μF,16V
C18	QETC1CM-226	E CAPACITOR	22μF,16V
C20	QETC1HM-105	E CAPACITOR	1μF,50V
C27	QETC1HM-105	E CAPACITOR	1μF,50V
C29	QETC1CM-226	E CAPACITOR	22μF,16V
C30	QETC1HM-106	E CAPACITOR,S9200EH	10μF,50V
	QETC1CM-106	E CAPACITOR,S9200EG	10μF,16V
C31	QETC1CM-106	E CAPACITOR,S9200EG	10μF,16V
	QETC1HM-106	E CAPACITOR,S9200EH	10μF,50V
C32	QETC1CM-476	E CAPACITOR	47μF,16V
C33	QETC1CM-476	E CAPACITOR	47μF,16V
C34	QETC1HM-106	E CAPACITOR,S9200EH	10μF,50V
	QETC1CM-106	E CAPACITOR,S9200EG	10μF,16V
C35	QETC1CM-106	E CAPACITOR,S9200EG	10μF,16V
	QETC1HM-106	E CAPACITOR,S9200EH	10μF,50V
C37	QCYA1EK-104	CAPACITOR	0.1μF,25V
C38	QCYA1EK-104	CAPACITOR	0.1μF,25V
C39	QETC1HM-475	E CAPACITOR	4.7μF,50V
C40	QETC1HM-475	E CAPACITOR	4.7μF,50V
C41	QETC1CM-476	E CAPACITOR	47μF,16V
C42	QETC1CM-106	E CAPACITOR,S9200EG	10μF,16V
	QETC1HM-106	E CAPACITOR,S9200EH	10μF,50V
C43	QETC1HM-106	E CAPACITOR,S9200EH	10μF,50V
	QETC1CM-106	E CAPACITOR,S9200EG	10μF,16V
C49	QETF1CM-106	E CAPACITOR,S9200EG	10μF,16V
	QETC1HM-106	E CAPACITOR,S9200EH	10μF,50V
C50	QETF1CM-106	E CAPACITOR	10μF,16V
C51	QETC1HM-225	E CAPACITOR	2.2μF,50V
C52	QETC1HM-106	E CAPACITOR,S9200EH	10μF,50V
	QETC1CM-106	E CAPACITOR,S9200EG	10μF,16V
C53	QETF1CM-106	E CAPACITOR	10μF,16V
C54	QETF1CM-106	E CAPACITOR	10μF,16V
C55	QETC1HM-225	E CAPACITOR	2.2μF,50V
C56	QETC1HM-105	E CAPACITOR	1μF,50V
C57	QETC1HM-105	E CAPACITOR	1μF,50V
C58	QCYA1HK-391	CAPACITOR	390pF,50V
C59	QETC1HM-105	E CAPACITOR	1μF,50V
C60	QETC1HM-105	E CAPACITOR	1μF,50V
C61	QETC1HM-106	E CAPACITOR	10μF,50V
C101	QCYA1HK-272	CAPACITOR	0.0027μF,50V
C102	QETC1CM-476	E CAPACITOR	47μF,16V
C103	QETC1HM-106	E CAPACITOR,S9200EH	10μF,50V
	QETC1CM-106	E CAPACITOR,S9200EG	10μF,16V
C104	QFLC1HJ-822Z	F CAPACITOR	0.0082μF,50V
C105	QFLC1HJ-392Z	F CAPACITOR	0.0039μF,50V
C106	QFLC1HJ-822Z	F CAPACITOR	0.0082μF,50V
C107	QFLC1HJ-392Z	F CAPACITOR	0.0039μF,50V
C108	PU60550-475	E CAPACITOR	4.7μF
C109	QCSA1HJ-681	CAPACITOR,S9200EG	680pF,50V
	QCTA1CH-681	CAPACITOR,S9200EH	680pF,16V
C111	QETC1CM-226	E CAPACITOR	22μF,16V
C112	QCYA1HK-123	CAPACITOR	0.012μF,50V
C114	QETC1HM-104	E CAPACITOR	0.1μF,50V
C115	QETC1HM-105	E CAPACITOR	1μF,50V
C117	QCYA1HK-223	CAPACITOR,S9200EG	0.022μF,50V
	QCYA1EK-223	CAPACITOR,S9200EH	0.022μF,25V
C118	QCYA1HK-103	CAPACITOR	0.01μF,50V
C119	QCYA1HK-332	CAPACITOR	0.0033μF,50V
C120	QETC1HM-225	E CAPACITOR	2.2μF,50V
C121	QFLC1HJ-333Z	F CAPACITOR	0.033μF,50V
C122	QCSA1HJ-331	CAPACITOR,S9200EG	330pF,50V
	QCTA1CH-331	CAPACITOR,S9200EH	330pF,16V
C123	QCYA1HK-103	CAPACITOR	0.01μF,50V
C124	QCYA1HK-332	CAPACITOR	0.0033μF,50V
C125	QCYA1HK-103	CAPACITOR	0.01μF,50V
C126	QETC1CM-106	E CAPACITOR,S9200EG	10μF,16V
	QETC1HM-106	E CAPACITOR,S9200EH	10μF,50V
C127	QFLC1HJ-333Z	F CAPACITOR	0.033μF,50V
C133	QCSA1HJ-821	CAPACITOR	820pF,50V
C134	QCSA1HJ-821	CAPACITOR	820pF,50V
C201	QETC1HM-105	E CAPACITOR	1μF,50V
C202	QEK61CM-106	E CAPACITOR	10μF,16V
C203	QEK61EM-335	E CAPACITOR	3.3μF,25V

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C204	QCSA1HJ-471	CAPACITOR,S9200EG	470pF,50V
	QCTA1CH-471	CAPACITOR,S9200EH	470pF,16V
C206	QCTA1CH-390	CAPACITOR,S9200EH	39pF,16V
	QCSA1HJ-390	CAPACITOR,S9200EG	39pF,50V
C207	QCYA1HK-103	CAPACITOR	0.01μF,50V
C208	QETC1CM-476	E CAPACITOR,S9200EH	47μF,16V
	QETC0JM-476	E CAPACITOR,S9200EG	47μF,6.3V
C209	QCSA1HJ-5R0	CAPACITOR,S9200EG	5pF,50V
	QCTA1CH-5R0	CAPACITOR,S9200EH	5pF,16V
C210	QCYA1HK-472	CAPACITOR	0.0047μF,50V
C211	QCTA1CH-820	CAPACITOR	82pF,16V
C212	QCTA1CH-181	CAPACITOR	180pF,16V
C213	QCTA1CH-220	CAPACITOR	22pF,16V
C214	QFN31HJ-471	F CAPACITOR	470pF,50V
C215	QEK61CM-476	E CAPACITOR	47μF,16V
C216	QETC1CM-476	E CAPACITOR,S9200EH	47μF,16V
	QETC0JM-476	E CAPACITOR,S9200EG	47μF,6.3V
C217	QCYA1HK-103	CAPACITOR	0.01μF,50V
C218	QCYA1HK-103	CAPACITOR	0.01μF,50V
C219	QFN31HJ-104	F CAPACITOR	0.1μF,50V
C220	QFN31HJ-104	F CAPACITOR	0.1μF,50V
C221	QETC1CM-476	E CAPACITOR,S9200EH	47μF,16V
	QETC0JM-476	E CAPACITOR,S9200EG	47μF,6.3V
C222	QCYA1HK-103	CAPACITOR	0.01μF,50V
C223	QCYA1HK-103	CAPACITOR	0.01μF,50V
C224	QCYA1HK-103	CAPACITOR	0.01μF,50V
C225	QCYA1HK-103	CAPACITOR	0.01μF,50V
C226	QEK61CM-476	E CAPACITOR	47μF,16V
C227	QCFA1HZ-103	CAPACITOR	0.01μF,50V
C229	QCSA1HJ-361	CAPACITOR,S9200EG	360pF,50V
	QCTA1CH-361	CAPACITOR,S9200EH	360pF,16V
C230	QCFA1HZ-103	CAPACITOR	0.01μF,50V
C231	QCFA1HZ-103	CAPACITOR	0.01μF,50V
C234	QCSA1HG-391	CAPACITOR	390pF,50V
C237	QCTA1CH-390	CAPACITOR,S9200EH	39pF,16V
	QCSA1HJ-390	CAPACITOR,S9200EG	39pF,50V
C238	QCYA1HK-473	CAPACITOR,S9200EG	0.047μF,50V
	QCYA1EK-473	CAPACITOR,S9200EH	0.047μF,25V
C239	QCTA1CH-560	CAPACITOR,S9200EH	56pF,16V
	QCSA1HJ-560	CAPACITOR,S9200EG	56pF,50V
C244	QCYA1HK-103	CAPACITOR	0.01μF,50V
C245	QETC1CM-476	E CAPACITOR,S9200EH	47μF,16V
	QETC0JM-476	E CAPACITOR,S9200EG	47μF,6.3V
C246	QCYA1HK-103	CAPACITOR	0.01μF,50V
C247	QCYA1HK-103	CAPACITOR	0.01μF,50V
C248	QEKF0JM-476	E CAPACITOR,S9200EG	47μF,6.3V
	QEKJ0JM-476	E CAPACITOR,S9200EH	47μF,6.3V
C251	QCYA1HK-103	CAPACITOR	0.01μF,50V
C252	QETC0JM-476	E CAPACITOR,S9200EG	47μF,6.3V
	QETC1CM-476	E CAPACITOR,S92200EH	47μF,16V
C253	QETC1HM-106	E CAPACITOR,S9200EH	10μF,50V
	QETC1CM-106	E CAPACITOR,S9200EG	10μF,16V
C254	QCYA1HK-103	CAPACITOR	0.01μF,50V
C255	QETC1CM-476	E CAPACITOR,S9200EH	47μF,16V
	QETC1CM-226	E CAPACITOR,S9200EG	22μF,16V
C256	QETC1CM-106	E CAPACITOR,S9200EG	10μF,16V
	QETC1HM-106	E CAPACITOR,S9200EH	10μF,50V
C258	QCYA1HK-103	CAPACITOR	0.01μF,50V
C259	QCYA1HK-103	CAPACITOR	0.01μF,50V
C260	QCTA1CH-680	CAPACITOR,S9200EH	68pF,16V
	QCSA1HJ-680	CAPACITOR,S9200EG	68pF,50V
C261	QCSA1HG-390	CAPACITOR	39pF,50V

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C262	QCSA1HG-151	CAPACITOR	150pF,50V
C263	QCSA1HJ-470	CAPACITOR	47pF,50V
C264	QCTA1CH-561	CAPACITOR,S9200EH	560pF,16V
	QCSA1HJ-471	CAPACITOR,S9200EG	470pF,50V
C265	QCTA1CH-470	CAPACITOR,S9200EH	47pF,16V
	QCSA1HJ-330	CAPACITOR,S9200EG	33pF,50V
C266	QCSA1HG-100	CAPACITOR,S9200EG	10pF,50V
	QCTA1CH-100	CAPACITOR,S9200EH	10pF,16V
C268	QEK60JM-476	E CAPACITOR	47μF,6.3V
C269	QCYA1EK-104	CAPACITOR,S9200EG	0.1μF,25V
C270	QETC1HM-474	E CAPACITOR	0.47μF,50V
C272	QCYA1HK-103	CAPACITOR	0.01μF,50V
C273	QCSA1HG-470	CAPACITOR	47pF,50V
C301	QCSA1HG-300	CAPACITOR	30pF,50V
C302	QCTA1CH-560	CAPACITOR,S9200EH	56pF,16V
	QCSA1HJ-560	CAPACITOR,S9200EG	56pF,50V
C304	QCSA1HJ-180	CAPACITOR,S9200EG	18pF,50V
	QCTA1CH-180	CAPACITOR,S9200EH	18pF,16V
C305	QCFA1HZ-103	CAPACITOR	0.01μF,50V
C306	QCSA1HJ-181	CAPACITOR,S9200EG	180pF,50V
	QCTA1CH-181	CAPACITOR,S9200EH	180pF,16V
C307	QCTA1CH-560	CAPACITOR,S9200EH	56pF,16V
	QCSA1HJ-560	CAPACITOR,S9200EG	56pF,50V
C308	QCYA1HK-103	CAPACITOR	0.01μF,50V
C309	QETC1CM-476	E CAPACITOR,S9200EH	47μF,16V
	QETC0JM-476	E CAPACITOR,S9200EG	47μF,6.3V
C310	QCFA1HZ-103	CAPACITOR	0.01μF,50V
C311	QCTA1CH-560	CAPACITOR,S9200EH	56pF,16V
	QCSA1HJ-560	CAPACITOR,S9200EG	56pF,50V
C312	QCFA1HZ-103	CAPACITOR	0.01μF,50V
C313	QCFA1HZ-103	CAPACITOR	0.01μF,50V
C314	QCFA1HZ-103	CAPACITOR	0.01μF,50V
C315	QCTA1CH-430	CAPACITOR,S9200EH	43pF,16V
	QCSA1HJ-430	CAPACITOR,S9200EG	43pF,50V
C316	QCFA1HZ-103	CAPACITOR	0.01μF,50V
C317	QCFA1HZ-103	CAPACITOR	0.01μF,50V
C318	QETC0JM-476	E CAPACITOR,S9200EG	47μF,6.3V
	QETC1CM-476	E CAPACITOR,S9200EH	47μF,16V
C319	QCYA1HK-103	CAPACITOR	0.01μF,50V
C320	QCFA1HZ-103	CAPACITOR	0.01μF,50V
C321	QCFA1HZ-103	CAPACITOR	0.01μF,50V
C322	QCFA1HZ-103	CAPACITOR	0.01μF,50V
C324	QCFA1HZ-103	CAPACITOR	0.01μF,50V
C325	QCVB1CN-103	CAPACITOR	0.01μF,16V
C326	QCTA1CH-120	CAPACITOR,S9200EH	12pF,16V
	QCSA1HJ-120	CAPACITOR,S9200EG	12pF,50V
C327	QCYA1EK-104	CAPACITOR	0.1μF,25V
C328	QCTA1CH-271	CAPACITOR,S9200EH	270pF,16V
	QCSA1HJ-271	CAPACITOR,S9200EG	270pF,50V
C329	QCYA1HK-103	CAPACITOR	0.01μF,50V
C330	QETC1CM-476	E CAPACITOR,S9200EH	47μF,16V
	QETC0JM-476	E CAPACITOR,S9200EG	47μF,6.3V
C331	QCFA1HZ-103	CAPACITOR	0.01μF,50V
C332	QCTA1CH-102	CAPACITOR,S9200EH	0.001μF,16V
	QCSA1HJ-102	CAPACITOR,S9200EG	0.001μF,50V
C333	QCSA1HJ-221	CAPACITOR,S9200EG	220pF,50V
	QCTA1CH-221	CAPACITOR,S9200EH	220pF,16V
C334	QCTA1CH-680	CAPACITOR,S9200EH	68pF,16V
	QCSA1HJ-680	CAPACITOR,S9200EG	68pF,50V
C401	QCYA1HK-102	CAPACITOR	0.001μF,50V
C402	QEKJ0JM-226	E CAPACITOR,S9200EH	22μF,6.3V
	QEKF0JM-226	E CAPACITOR,S9200EG	22μF,6.3V

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	C403	QEKJ0JM-226	E CAPACITOR	22µF,6.3V
	C404	QCTA1CH-101	CAPACITOR	100pF,16V
	C405	QCYA1HK-102	CAPACITOR	0.001µF,50V
	C406	QFLC1HJ-223Z	F CAPACITOR	0.022µF,50V
	C407	QCYA1HK-102	CAPACITOR	0.001µF,50V
	C408	QCC31CK-563	CAPACITOR	0.056µF,16V
	C409	QCYA1HK-102	CAPACITOR	0.001µF,50V
	C410	QCYA1HK-103	CAPACITOR	0.01µF,50V
	C411	QCYA1HK-103	CAPACITOR	0.01µF,50V
	C412	QEKJ1CM-106	E CAPACITOR,S9200EH	10µF,16V
		QEKF1CM-106	E CAPACITOR,S9200EG	10µF,16V
	C413	QFV11HJ-224AZ	F CAPACITOR	0.22µF,50V
	C414	QFLC1HJ-222Z	F CAPACITOR	0.0022µF,50V
	C415	QEKF1EM-475	E CAPACITOR,S9200EG	4.7µF,25V
		QEKJ1HM-475	E CAPACITOR,S9200EH	4.7µF,50V
	C416	QEKJ1HM-475	E CAPACITOR,S9200EH	4.7µF,50V
		QEKF1EM-475	E CAPACITOR,S9200EG	4.7µF,25V
	C417	QEKF1CM-106	E CAPACITOR,S9200EG	10µF,16V
		QEKJ1CM-106	E CAPACITOR,S9200EH	10µF,16V
	C418	QEKJ1CM-106	E CAPACITOR,S9200EH	10µF,16V
		QEKF1CM-106	E CAPACITOR,S9200EG	10µF,16V
	C419	QFLC1HJ-153Z	F CAPACITOR	0.015µF,50V
	C420	QFV11HJ-124AZ	F CAPACITOR	0.12µF,50V
	C421	QCTA1CH-471	CAPACITOR	470pF,16V
	C431	QCYA1HK-102	CAPACITOR	0.001µF,50V
	C451	QCYA1HK-103	CAPACITOR	0.01µF,50V
	C452	QCC31CK-104	CAPACITOR	0.1µF,16V
	C453	QCYA1HK-103	CAPACITOR	0.01µF,50V
	C454	QCYA1HK-103	CAPACITOR	0.01µF,50V
	C455	QCYA1HK-103	CAPACITOR	0.01µF,50V
	C456	QCYA1HK-103	CAPACITOR	0.01µF,50V
	C458	QEKF1CM-106	E CAPACITOR,S9200EG	10µF,16V
		QEKJ1CM-106	E CAPACITOR,S9200EH	10µF,16V
	C459	QFV11HJ-104AZ	F CAPACITOR	0.1µF,50V
	C478	QCYA1HK-103	CAPACITOR	0.01µF,50V
	C479	QEKJ1CM-106	E CAPACITOR,S9200EH	10µF,16V
		QEKF1CM-106	E CAPACITOR,S9200EG	10µF,16V
	C601	QEKJ1CM-106	E CAPACITOR,S9200EH	10µF,16V
		QEKF1CM-106	E CAPACITOR,S9200EG	10µF,16V
	C602	QEKF0JM-107	E CAPACITOR,S9200EG	100µF,6.3V
		QEKJ0JM-107	E CAPACITOR,S9200EH	100µF,6.3V
	C605	QEKJ1CM-106	E CAPACITOR,S9200EH	10µF,16V
		QEKF1CM-106	E CAPACITOR,S9200EG	10µF,16V
	C606	QCYA1HJ-103	CAPACITOR	0.01µF,50V
	C607	PU60676-223	E CAPACITOR	0.022µF,5.5V
	C608	QCYA1HJ-102	CAPACITOR	0.001µF,50V
	C623	QCTA1CH-180	CAPACITOR	18pF,16V
	C624	QAT3120-450Z	TRIM CAPACITOR,TIMER CLOCK	
	C625	QCYA1EK-473	CAPACITOR	0.047µF,25V
	C628	QCYA1EK-473	CAPACITOR	0.047µF,25V
	C629	QCF11HP-473	CAPACITOR	0.047µF,50V
	C633	QER61EM-106	E CAPACITOR	10µF,25V
	C701	QCTA1CH-220	CAPACITOR,S9200EH	22pF,16V
		QCSA1HJ-220	CAPACITOR,S9200EG	22pF,50V
	C702	QCYA1HK-102	CAPACITOR	0.001µF,50V
	C703	QCYA1EK-104	CAPACITOR	0.1µF,25V
	C704	QCSA1HJ-220	CAPACITOR,S9200EG	22pF,50V
		QCTA1CH-220	CAPACITOR,S9200EH	22pF,16V
	C705	QCTA1CH-220	CAPACITOR,S9200EH	22pF,16V
		QCSA1HJ-220	CAPACITOR,S9200EG	22pF,50V
	C706	QCSA1HJ-220	CAPACITOR,S9200EG	22pF,50V
		QCTA1CH-220	CAPACITOR,S9200EH	22pF,16V

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	C708	QCTA1CH-470	CAPACITOR,S9200EH	47pF,16V
		QCSA1HJ-470	CAPACITOR,S9200EG	47pF,50V
	C710	QEKF1HM-335	E CAPACITOR,S9200EG	3.3µF,50V
		QEKJ1HM-335	E CAPACITOR,S9200EH	3.3µF,50V
	C711	QCTA1CH-101	CAPACITOR,S9200EH	100pF,16V
		QCSA1HJ-101	CAPACITOR,S9200EG	100pF,50V
	C712	QCSA1HJ-101	CAPACITOR,S9200EG	100pF,50V
		QCTA1CH-101	CAPACITOR,S9200EH	100pF,16V
	C713	QCTA1CH-101	CAPACITOR,S9200EH	100pF,16V
		QCSA1HJ-101	CAPACITOR,S9200EG	100pF,50V
	L1	PELN0530-101JZ	COIL	100µH
	L101	PU58308-123J	COIL	12mH
	L201	PU48530-101K	COIL	100µH
	L202	PU48530-101K	COIL	100µH
	L203	PU48530-101K	COIL	100µH
	L204	PU48530-101K	COIL	100µH
	L205	PU48530-101K	COIL	100µH
	L208	PU48530-222J	COIL	2.2mH
	L209	PU59988-221J	COIL	220µH
	L211	PU48530-101K	COIL	100µH
	L212	PU48530-101K	COIL	100µH
⚠	L215	PU48530-102J	COIL	1mH
	L216	PU59988-151JW	COIL	150µH
	L217	PU48530-471J	COIL	470µH
	L218	PU59988-120J	COIL	12µH
	L221	PU48530-101K	COIL	100µH
	L301	PU59988-330J	COIL	33µH
	L302	PU59988-150J	COIL	15µH
	L303	PU59988-560J	COIL	56µH
	L304	PU59988-101J	COIL	100µH
	L305	PU48530-101K	COIL	100µH
	L306	PU59988-680J	COIL	68µH
	L308	PU48530-101K	COIL	100µH
	L309	PU48530-101K	COIL	100µH
	L310	PU59988-180J	COIL	18µH
	L311	PU59988-680J	COIL	68µH
	L312	PU48530-121J	COIL	120µH
	L451	PU59152-270J	COIL	27µH
	L602	PU54223-100J	COIL	10µH
⚠	CF601	PEVB0497	RESONATOR	
⚠	CF701	PEVB0340	RESONATOR	
	LC201	PU60655	COIL,SECAM DET	
	LC202	PU60714	EQUALIZER	
	LC205	PU60813	LCF	
⚠	X601	PEVB0422	CRYSTAL RESONATOR	
	K1	PU60281-5	FERRITE BEADS	
⚠	TH601	PESC1089-Z	POSI THERMISTOR	
⚠	T101	PELN0860	OSC TRANSFORMER	
⚠	T102	PELN0861	OSC TRANSFORMER	
	JA1	PEMC0893-02	PIN JACK(SW),AUDIO IN R	
	JA2	PEMC0893-03	PIN JACK(SW),AUDIO IN L	
	JA3	PU60833-2	PIN JACK.OUT R	
	JA4	PU60833-3	PIN JACK,OUT L	
	CN1	PEMC1101-009	CONNECTOR,(1-9)PRE/REC	
	CN4	PU59555-3	CONNECTOR,(1-3)SW/JACK	
	CN5	PU59555-3	CONNECTOR,(1-3)SW/JACK	
	CN6	PU59555-7	CONNECTOR,(1-7)TUNER S9200EH	
		PU59555-5	CONNECTOR,(1-5)TUNER S9200EG	
	CN7	PEMC0969-113	CONNECTOR,(1-13)TERMINAL S9200EG	
		PEMC0969-111	CONNECTOR,(1-11)TERMINAL S9200EH	
	CN9	PU59555-2	CONNECTOR,(1-2)TUNER	
		PW30375-0221608	WIRE,TUNER	

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION
	CN101	PU59555-4	CONNECTOR,(1-4)REC/PLAY HEAD
	CN102	PU59555-2	CONNECTOR,(1-2)FE HEAD
	CN201	PEMC1101-016	CONNECTOR,(1-16)PRE REC
	CN202	PEMC1053-030	CONNECTOR,(1-30)VIDEO UNIT
	CN203	PEMC1053-030	CONNECTOR,(1-30)VIDEO UNIT
	CN204	PEMC0714-013	CONNECTOR,(1-13)Y/C SEPALETIO
	CN205	PEMC0714-012	CONNECTOR,(1-12)Y/C SEPALATIO
	CN206	PEMC0969-113	CONNECTOR,(1-13)TERMINAL
	CN207	PEMC0969-112	CONNECTION,(1-12)TERMINAL S9200EG
		PEMC0969-110	CONNECTOR,(1-11)TERMINAL S9200EH
	CN208	PU59555-6	CONNECTOR,(1-6)TUNER
	CN209	PU60910-7	CONNECTOR,(3-9)SW REG
	CN212	PU59555-4	CONNECTOR,(1-4)EVR DEC.
	CN213	PU59555-2	CONNECTOR,(1-2)SW REG
	CN214	PEMC1101-017	CONNECTOR,(1-17)PAL PLUS
	CN215	PU59555-2	CONNECTOR,(2-3)DISPLAY
	CN216	PEMC1101-017	CONNECTOR,(1-17)PAL PLUS
	CN401	PU59555-3	CONNECTOR,(1-3)CTL HEAD
	CN402	PEMC1101-004	CONNECTOR,(1-4)DRUM MOTOR
	CN601	PEMC1101-016	CONNECTOR,(1-16)DECK TERMINAL
	CN602	PEMC1101-004	CONNECTOR,(1-4)SW/JACK
	CN603	PEMC1101-008	CONNECTOR,(1-8)DISPLAY
	CN604	PU59555-8	CONNECTOR,(1-7)JOG
	CN605	PU60910-5	CONNECTOR,(1-5)SW REG
	CN606	PEMC1101-014	CONNECTOR,(1-14)TUNER
⚠	CP1	ICP-N10	CIRCUIT PROTECTOR
⚠	CP401	ICP-N15	CIRCUIT PROTECTOR
⚠	CP601	ICP-N20	CIRCUIT PROTECTOR

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VIDEO UNIT BOARD ASSEMBLY <05>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	PWBA	PB10831E	VIDEO UNIT BOARD ASSEMBLY	
	IC1	JCP0054	IC	
	IC2	M62353GP	IC	
	IC3	NJM431U-XE	IC	
	IC4	VC2076MP-XE	IC	
	IC5	HA118092FP-XE	IC	
	IC6	CAT35C104P-051	IC	
	IC7	TC4S81F	IC	
	Q1	2SA1576(QRS)	TRANSISTOR	
	Q2	DTC144WU	TRANSISTOR	
	Q4	DTA144EU	TRANSISTOR	
	Q5	2SC4081(QRS)	TRANSISTOR	
	Q6	2SA1576(QRS)	TRANSISTOR	
	Q7	DTA144EU	TRANSISTOR	
	Q8	DTC144WU	TRANSISTOR	
	Q9	DTC144WU	TRANSISTOR	
	Q11	DTC144WU	TRANSISTOR	
	Q12	DTC144WU	TRANSISTOR	
	Q13	2SC4081(QRS)	TRANSISTOR	
	D1	DAP202U	DIODE	
	D2	DAN202U	DIODE	
	D3	1SS355	DIODE	
	R2	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R3	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R5	NRSA63J-182N	RESISTOR	1.8kΩ,1/16W
	R6	NRSA63J-472N	RESISTOR	4.7kΩ,1/16W
	R7	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R8	NRSA63J-333N	RESISTOR	33kΩ,1/16W
	R9	NRVA63D-822N	MF RESISTOR	8.2kΩ,1/16W
	R10	NRVA63D-152N	MF RESESTOR	
	R11	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
	R13	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
	R14	NRSA63J-821N	RESISTOR	820Ω,1/16W
	R17	NRSA63J-391N	RESISTOR	390Ω,1/16W
	R18	NRVA63D-391N	RESISTOR	390Ω,1/16W
	R19	NRVA63D-102N	MF RESISTOR	1kΩ,1/16W
	R20	NRSA63J-391N	RESISTOR	390Ω,1/16W
	R21	NRSA63J-152N	RESISTOR	1.5kΩ,1/16W
	R23	NRSA63J-391N	RESISTOR	390Ω,1/16W
	R24	NRSA63J-332N	RESISTOR	3.3kΩ,1/16W
	R25	NRSA63J-332N	RESISTOR	3.3kΩ,1/16W
	R26	NRSA63J-151N	RESISTOR	150Ω,1/16W
	R27	NRSA63J-162N	RESISTOR	1.6kΩ,1/16W
	R28	NRSA63J-391N	RESISTOR	390Ω,1/16W
	R29	NRSA63J-122N	RESISTOR	1.2kΩ,1/16W
	R30	NRVA63D-102N	MF RESISTOR	1kΩ,1/16W
	R31	NRVA63D-471N	RESISTOR	470Ω,1/16W
	R32	NRVA63D-102N	MF RESISTOR	1kΩ,1/16W
	R33	NRVA63D-152N	MF RESESTOR	
	R34	NRVA63D-332N	MF RESISTOR	3.3kΩ,1/16W
	R35	NRVA63D-332N	MF RESISTOR	3.3kΩ,1/16W
	R37	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R38	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R39	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R40	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R41	NRSA63J-823N	RESISTOR	82kΩ,1/16W
	R43	NRSA63J-273N	RESISTOR	27kΩ,1/16W
	R45	NRSA63J-181N	RESISTOR	180Ω,1/16W
	R46	NRSA63J-912N	RESISTOR	9.1kΩ,1/16W
	R47	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R48	NRVA63D-243N	RESISTOR	24kΩ,1/16W
	R49	NRSA63J-101N	RESISTOR	100Ω,1/16W
	R50	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R51	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R52	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R53	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R54	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R55	NRVA63D-272N	MF RESISTOR	2.7kΩ,1/16W
	R56	NRVA63D-682N	MF RESISTOR	6.8kΩ,1/16W
	R57	NRVA63D-162N	MF RESISTOR	1.6kΩ,1/16W
	R58	NRVA63D-682N	MF RESISTOR	6.8kΩ,1/16W
	R59	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R60	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R61	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R62	NRSA63J-221N	RESISTOR	220Ω,1/16W
	R63	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R64	NRSA63J-475N	RESISTOR	4.7MΩ,1/16W
	R65	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R68	NRSA63J-101N	RESISTOR	100Ω,1/16W
	R69	NRSA63J-101N	RESISTOR	100Ω,1/16W
	R70	NRSA63J-272N	RESISTOR	2.7kΩ,1/16W
	R73	NRSA63J-334N	RESISTOR	330kΩ,1/16W
	R74	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R75	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R78	NRSA63J-125N	RESISTOR	1.2MΩ,1/16W
	R79	NRSA63J-332N	RESISTOR	3.3kΩ,1/16W
	R82	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R83	NRSA63J-103N	RESISTOR	10kΩ,1/16W

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	R84	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	C1	QETC1HM-224	E CAPACITOR	0.22µF,50V
	C2	NCF31HZ-103A	CAPACITOR	0.01µF,50V
	C5	QETC1HM-105	E CAPACITOR	1µF,50V
	C7	QETC1HM-104	E CAPACITOR	0.1µF,50V
	C8	NCT08CH-360A	CAPACITOR	36pF,50V
	C10	NCF31EZ-104A	CAPACITOR	0.1µF,25V
	C11	NCB31HK-103A	CAPACITOR	0.01µF,50V
	C12	QETC1EM-106	E CAPACITOR	10µF,25V
	C13	QETC1HM-225	E CAPACITOR	2.2µF,50V
	C14	NCF31EZ-104A	CAPACITOR	0.1µF,25V
	C15	QETC1EM-475	E CAPACITOR	4.7µF,25V
	C16	NCB31EK-123A	CAPACITOR	0.012µF,25V
	C17	QCYA1EK-563	CAPACITOR	0.056µF,25V
	C18	QETC1HM-105	E CAPACITOR	1µF,50V
	C19	QETC0JM-476	E CAPACITOR	47µF,6.3V
	C20	NCB31HK-103A	CAPACITOR	0.01µF,50V
	C21	NCF31HZ-103A	CAPACITOR	0.01µF,50V
	C23	QCYA1EK-104	CAPACITOR	0.1µF,25V
	C24	QETC1HM-334	E CAPACITOR	0.33µF,50V
	C25	NCF31HZ-103A	CAPACITOR	0.01µF,50V
	C26	NCF31HZ-103A	CAPACITOR	0.01µF,50V
	C27	NCF31HZ-103A	CAPACITOR	0.01µF,50V
	C28	NCB31HK-103A	CAPACITOR	0.01µF,50V
	C29	QETC0JM-476	E CAPACITOR	47µF,6.3V
	C30	NCB31EK-103A	CAPACITOR	0.01µF,25V
	C31	NCT08CH-161A	CAPACITOR	160pF,50V
	C33	QETC1HM-104	E CAPACITOR	0.1µF,50V
	C35	NCF31HZ-103A	CAPACITOR	0.01µF,50V
	C36	NCF31HZ-103A	CAPACITOR	0.01µF,50V
	C37	QETC1HM-474	E CAPACITOR	0.47µF,50V
	C38	QETC1HM-104	E CAPACITOR	0.1µF,50V
	C39	QETC1HM-474	E CAPACITOR	0.47µF,50V
	C40	NCF31HZ-103A	CAPACITOR	0.01µF,50V
	C41	QETC1CM-106	E CAPACITOR	10µF,16V
	C42	QETC1CM-106	E CAPACITOR	10µF,16V
	C43	QCC31EK-473	CAPACITOR	0.047µF,25V
	C44	NCB31HK-103A	CAPACITOR	0.01µF,50V
	C45	QETC1CM-226	E CAPACITOR	22µF,16V
	C46	NCS31HJ-470A	CAPACITOR	47pF,50V
	C47	QETC1HM-225	E CAPACITOR	2.2µF,50V
	C48	QETC1CM-226	E CAPACITOR	22µF,16V
	C49	QETC1HM-225	E CAPACITOR	2.2µF,50V
	C50	NCF31EZ-104A	CAPACITOR	0.1µF,25V
	C51	NCB31HK-103A	CAPACITOR	0.01µF,50V
	C52	NCB31HK-103A	CAPACITOR	0.01µF,50V
	C53	QETC0JM-476	E CAPACITOR	47µF,6.3V
	C54	NCS31HJ-101A	CAPACITOR	100pF,50V
	C55	NCS31HJ-101A	CAPACITOR	100pF,50V
	C56	QETC1EM-475	E CAPACITOR	4.7µF,25V
	C57	NCS31HJ-301A	CAPACITOR	300pF,50V
	C58	NCS31HJ-301A	CAPACITOR	300pF,50V
	C59	NCS31HJ-181A	CAPACITOR	180pF,50V
	C60	NCS31HJ-101A	CAPACITOR	100pF,50V
	C61	NCS31HG-271A	CAPACITOR	270pF,50V
	C62	NCS31HG-820A	CAPACITOR	82pF,50V
	C63	NCS31HG-221A	CAPACITOR	220pF,50V
	C64	NCS31HG-301A	CAPACITOR	300pF,50V
	C65	NCS31HG-301A	CAPACITOR	300pF,50V
	C66	NCB31HK-103A	CAPACITOR	0.01µF,50V
	C67	QETC0JM-476	E CAPACITOR	47µF,6.3V
	C69	NCB31HK-103A	CAPACITOR	0.01µF,50V

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	C70	QETC1HM-225	E CAPACITOR	2.2µF,50V
	C71	QETC1HM-225	E CAPACITOR	2.2µF,50V
	C72	NCS31HJ-331A	CAPACITOR	330pF,50V
	C73	NCF31HZ-103A	CAPACITOR	0.01µF,50V
	C74	NCB31HK-103A	CAPACITOR	0.01µF,50V
	C75	QETC0JM-476	E CAPACITOR	47µF,6.3V
	C76	NCB31EK-223A	CAPACITOR	0.022µF,25V
	C77	NCF31HZ-103A	CAPACITOR	0.01µF,50V
	C78	QETC1HM-105	E CAPACITOR	1µF,50V
	C79	QETC1CM-106	E CAPACITOR	10µF,16V
	C80	NCF31HZ-103A	CAPACITOR	0.01µF,50V
	C81	NCF31HZ-103A	CAPACITOR	0.01µF,50V
	C84	NCF31HZ-103A	CAPACITOR	0.01µF,50V
	C85	NCF31HZ-103A	CAPACITOR	0.01µF,50V
	C86	NCF31HZ-103A	CAPACITOR	0.01µF,50V
	C87	NCF31HZ-103A	CAPACITOR	0.01µF,50V
	C88	NCF31HZ-103A	CAPACITOR	0.01µF,50V
	C89	NCF31HZ-103A	CAPACITOR	0.01µF,50V
	C92	NCS31HJ-330A	CAPACITOR	33pF,50V
	C99	NCF31HZ-103A	CAPACITOR	0.01µF,50V
	C102	NCB31EK-103A	CAPACITOR	0.01µF,25V
	C104	QETC1HM-224	E CAPACITOR	0.22µF,50V
	L1	PU59153-822J	COIL	8.2mH
⚠	L2	PU48530-271K	COIL	270µH
⚠	L4	PU48530-331K	COIL	330µH
	L6	PU58201-270J	COIL	27µH
	L7	PU48530-101K	COIL	100µH
	L8	PU48530-101K	COIL	100µH
	L9	PU48530-101K	COIL	100µH
	LC1	PELN0938-S	LC FILTER	
	LC2	PELN0945-S	LC FILTER	
	LC4	PELN0940-S	LC TRAP	
	LC5	PELN0940-S	LC TRAP	
⚠	X1	PEVB0550-Z	CRYSTAL RESONATOR	
	K1	PELN1036-241Y	FERRITE BEADS	
	CN1	PEMC1054-130	CONNECTOR,(1-30)MAIN	
	CN2	PEMC1054-130	CONNECTOR,(1-30)MAIN	

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TERMINAL BOARD ASSEMBLY <06>

REF No.	PART No.	PART NAME, DESCRIPTION
PWBA	PB10804E	TERMINAL BOARD ASSY,S9200EG
	PB10804C-01	TERMINAL BOARD ASSY,S9200EH
IC1	MC74HC4052N	IC
	or TC74HC4052AP	IC
IC2	MC74HC4053N	IC,S9200EG
	or TC74HC4053AP	IC,S9200EG
IC3	MC74HC4051N	IC
	or TC74HC4051AP	IC
IC4	MM1031XS	IC,S9200EG
IC5	BA7623F	IC
IC6	HA118070	IC
IC7	TC7S66F	IC
Q1	2SA1576(QRS)	TRANSISTOR
Q2	2SA1576(QRS)	TRANSISTOR
Q3	2SA1577(QRS)	TRANSISTOR
Q4	DTC143TU	TRANSISTOR
Q5	DTA124EU	TRANSISTOR

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
Q6	2SC4081(QRS)	TRANSISTOR	
Q7	2SC4081(QRS)	TRANSISTOR	
Q8	2SC4081(QRS)	TRANSISTOR	
Q9	2SC4081(QRS)	TRANSISTOR	
Q10	2SC4081(QRS)	TRANSISTOR	
Q11	2SC4081(QRS)	TRANSISTOR	
Q12	2SC4081(QRS)	TRANSISTOR	
Q13	DTA144EU	TRANSISTOR	
Q14	DTC144WU	TRANSISTOR	
Q15	2SA1576(QRS)	TRANSISTOR	
Q16	2SC4081(QRS)	TRANSISTOR	
Q17	2SC4081(QRS)	TRANSISTOR	
Q18	DTC144WU	TRANSISTOR	
Q19	2SA1576(QRS)	TRANSISTOR	
D1	1SS133	DIODE,S9200EG	
	or MA165	DIODE,S9200EG	
	or 1N4148M	DIODE	
D2	DAN202U	DIODE	
D4	DAN202U	DIODE	
D6	1SS133	DIODE	
	or 1N4148M	DIODE	
	or MA165	DIODE	
	or 1N4148M	DIODE	
D7	1SS133	DIODE	
	or MA165	DIODE	
	or 1N4148M	DIODE	
D8	1SS133	DIODE	
	or 1N4148M	DIODE	
	or MA165	DIODE	
	or 1N4148M	DIODE	
R1	QRSA08J-750YN	RESISTOR	75Ω,1/10W
R2	QRSA08J-750YN	RESISTOR	75Ω,1/10W
R3	QRSA08J-750YN	RESISTOR	75Ω,1/10W
R4	QRSA08J-750YN	RESISTOR	75Ω,1/10W
R5	QRSA08J-750YN	RESISTOR	75Ω,1/10W
R6	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R7	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R8	QRSA08J-622YN	RESISTOR	6.2kΩ,1/10W
R9	QRSA08J-622YN	RESISTOR	6.2kΩ,1/10W
R10	QRSA08J-103YN	RESISTOR,S9200EH	10kΩ,1/10W
	QRSA08J-104YN	RESISTOR,S9200EG	100kΩ,1/10W
R11	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R12	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R13	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
R14	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
R15	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
R16	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
R17	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
R18	QRD161J-750	RESISTOR	75Ω,1/6W
R20	NRVA62D-750N	RESISTOR	75Ω,1/16W
R22	QRD161G-750	RESISTOR	75Ω,1/6W
R23	QRD161J-152	RESISTOR	1.5kΩ,1/6W
R24	QRSA08J-750YN	RESISTOR,S9200EG	75Ω,1/10W
R25	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
R26	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R27	QRD123J-391SX	RESISTOR	390Ω,1/2W
R28	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R29	QRD161J-750	RESISTOR	75Ω,1/6W
R30	QRSA08J-750YN	RESISTOR	75Ω,1/10W
R31	QRSA08J-750YN	RESISTOR	75Ω,1/10W
R32	QRSA08J-750YN	RESISTOR	75Ω,1/10W
R33	QRSA08J-101YN	RESISTOR	100Ω,1/10W

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R34	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R35	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R36	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R37	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R39	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R40	QRSA08J-683YN	RESISTOR	68kΩ,1/10W
R41	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R42	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R43	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R44	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R45	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
R46	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
R47	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R48	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
R49	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
R50	QRSA08J-331YN	RESISTOR	330Ω,1/10W
R51	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R52	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R53	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R54	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R55	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R56	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R57	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R58	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R59	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
R60	QRSA08J-683YN	RESISTOR	68kΩ,1/10W
R61	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R62	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
R63	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R64	QRSA08J-154YN	RESISTOR	150kΩ,1/10W
R65	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R66	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R67	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R68	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R69	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R70	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R71	QRSA08J-683YN	RESISTOR	68kΩ,1/10W
R72	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R73	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R74	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R75	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R76	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R801	QRSA08J-221YN	RESISTOR,S9200EG	220Ω,1/10W
R802	QRSA08J-221YN	RESISTOR,S9200EG	220Ω,1/10W
R803	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R804	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R851	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R852	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R853	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R854	QRD181J-0R0	RESISTOR	0Ω,1/8W
C1	QCYA1HK-103	CAPACITOR	0.01μF,50V
C2	QEK61CM-106	E CAPACITOR	10μF,16V
C3	QEK61CM-106	E CAPACITOR	10μF,16V
C4	QCYA1HK-103	CAPACITOR	0.01μF,50V
C5	QCYA1HK-103	CAPACITOR	0.01μF,50V
C6	QEK60JM-476	E CAPACITOR	47μF,6.3V
C7	QEK61CM-106	E CAPACITOR,S9200EG	10μF,16V
C8	QCYA1HK-103	CAPACITOR,S9200EG	0.01μF,50V
C9	QEK60JM-476	E CAPACITOR,S9200EG	47μF,6.3V
C10	QCYA1HK-103	CAPACITOR	0.01μF,50V
C11	QEK60JM-476	E CAPACITOR	47μF,6.3V
C12	QCYA1HK-103	CAPACITOR	0.01μF,50V

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	C13	PECA0783-108MZ	E CAPACITOR	
	C14	PECA0783-108MZ	E CAPACITOR	
	C15	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C16	QEK60JM-476	E CAPACITOR	47μF,6.3V
	C17	PECA0783-108MZ	E CAPACITOR,S9200EG	
	C18	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C19	QCVB1CN-103	CAPACITOR	0.01μF,16V
	C20	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C21	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C22	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C23	QCYA1HK-103	CAPACITOR,S9200EG	0.01μF,50V
	C24	QCYA1HK-103	CAPACITOR,S9200EG	0.01μF,50V
	C25	QEK61AM-476	E CAPACITOR	47μF,10V
	C26	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C27	QETC1CM-476	E CAPACITOR	47μF,16V
	C28	QETC0JM-107	E CAPACITOR	100μF,6.3V
	C29	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C30	QETC1CM-106	E CAPACITOR	10μF,16V
	C31	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C32	QETC1CM-476	E CAPACITOR	47μF,16V
	C33	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C34	QETC1HM-105	E CAPACITOR	1μF,50V
	C35	QCFA1HZ-103	CAPACITOR	0.01μF,50V
	C36	QCFA1HZ-103	CAPACITOR	0.01μF,50V
	C37	QCFA1HZ-103	CAPACITOR	0.01μF,50V
	C38	QCFA1HZ-103	CAPACITOR	0.01μF,50V
	C39	QCSA1HJ-560	CAPACITOR	56pF,50V
	C40	QCFA1HZ-103	CAPACITOR	0.01μF,50V
	C41	QCSA1HJ-470	CAPACITOR	47pF,50V
	C42	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C43	QETC0JM-476	E CAPACITOR	47μF,6.3V
	C44	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C45	QCSA1HJ-680	CAPACITOR	68pF,50V
	C46	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C47	QCYA1EK-104	CAPACITOR	0.1μF,25V
	C48	QEK61EM-335	E CAPACITOR	3.3μF,25V
	C49	QCYA1HK-102	CAPACITOR	0.001μF,50V
	C50	QEK61CM-106	E CAPACITOR	10μF,16V
	C51	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C52	QEK61HM-225	E CAPACITOR	2.2μF,50V
	C53	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C54	QETC0JM-476	E CAPACITOR	47μF,6.3V
	C55	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C56	QETC0JM-476	E CAPACITOR	47μF,6.3V
	C57	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C58	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C59	QETC1CM-106	E CAPACITOR	10μF,16V
	L1	PU48530-101K	COIL	100μH
	L2	PU48530-101K	COIL	100μH
	L3	PU48530-101K	COIL,S9200EG	100μH
	L4	PU48530-101K	COIL	100μH
	L5	PU48530-101K	COIL	100μH
	L6	PU48530-101K	COIL	100μH
	L7	PU48530-101K	COIL	100μH
	L8	PU48530-101K	COIL	100μH
	L9	PU59988-180J	COIL	18μH
	L10	PU48530-101K	COIL	100μH
	L11	PU48530-101K	COIL	100μH
	LC1	PU57072	BAND PASS FILTER	
	LC801	PU59885-102	N FILTER	
	LC802	PU59885-102	N FILTER	
	LC803	PU59885-102	N FILTER	

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION
	LC804	PU59885-102	N FILTER
	LC805	PU59885-102	N FILTER
	LC806	PU59885-102	N FILTER
	LC807	PU59885-102	N FILTER,S9200EG
	LC808	PU59885-102	N FILTER,S9200EG
	S801	PU58486-1-1	SLIDE SWITCH,AV1 OUT SEL
	S802	PU58486-1-1	SLIDE SWITCH,AV2 SEL S9200EG
	K802	PU60281-5	FERRATE BEADS
	K803	PU60281-5	FERRATE BEADS
	K804	PU60281-5	FERRATE BEADS
	JA801	PU59592	PERRI.CONNECTOR,AV1 IN/OUT
		or PEMC1019	RGB21P SOCKET,AV1 IN /OUT
	JA802	PU59592	PERRI.CONNECTOR,AV2 IN/DECORD
		or PEMC1019	RGB21P SOCKET,AV2 IN/DECORDER
	JA803	PEMC0963	S JACK,S IN
	JA804	PEMC0963	S JACK,S OUT
	CN1	PU59555-6	CONNECTOR,(1-6)TUNER
	CN801	PEMC0970-213	CONNECTOR,(1-13)MAIN S9200EG
		PEMC0970-211	CONNECTOR,(1-11)MAIN S9200EH
	CN802	PEMC0970-210	CONNECTOR,(1-10)MAIN S9200EH
		PEMC0970-212	CONNECTOR,(1-12)MAIN S9200EG
	CN803	PEMC0970-213	CONNECTOR,(1-13)MAIN
	CN811	PU59555-2	CONNECTOR,(1-2)TUNER

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TUNER/DEMOD/P/V BOARD ASSY(S9200EG)<07>

– TUNER/DEMOD/P/V BOARD ASSY(S9200EG) –

	PWBA1	PB10773D	TU/DEM/P/V BOARD ASSEMBLY	
⚠	TU1	PERF0123-01-01	TUNER	
⚠	TU2	PERF0228	IF UNIT	
⚠	RF1	PERF0157	RF CONVERTER	
	IC101	SAA4700	IC	
	IC208	TDA8415	IC	
		or TDA8416	IC	
	IC209	UPC1391H	IC	
	Q1	DTC114ES	TRANSISTOR	
	Q2	2SB810H,J	TRANSISTOR	
	Q3	2SC3068	TRANSISTOR	
	Q12	2SK381(C)	FE TRANSISTOR	
	Q13	DTC144ES	TRANSISTOR	
	Q14	2SC1740S(S)	TRANSISTOR	
	Q15	2SA933S(S)	TRANSISTOR	
	Q16	2SC1740S(S)	TRANSISTOR	
	Q17	DTC144ES	TRANSISTOR	
	Q206	FMG3	TRANSISTOR	
	Q208	DTA114TU	TRANSISTOR	
	Q209	2SA1532(C)	TRANSISTOR	
	Q210	DTC114EU	TRANSISTOR	
	Q211	2SD1450S,T	TRANSISTOR	
	D1	HZ30-2L-T2	ZENER DIODE	
	D2	1SS133	DIODE	
	D3	1SS133	DIODE	
	D4	1SS133	DIODE	
	D201	DAP202U	DIODE	
	R1	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
	R2	QRSA08J-153YN	RESISTOR	15kΩ,1/10W

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	R3	QRSA08J-331YN	RESISTOR	330Ω,1/10W
	R20	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R30	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
	R31	QRSA08J-683YN	RESISTOR	68kΩ,1/10W
	R32	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
	R33	QRSA08J-821YN	RESISTOR	820Ω,1/10W
	R34	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R35	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
	R36	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
	R37	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R38	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
	R39	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R40	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
	R101	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
	R102	QRSA08J-753YN	RESISTOR	75kΩ,1/10W
	R103	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R255	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R256	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R257	NRSA63J-101N	RESISTOR	100Ω,1/16W
	R260	NRSA63J-122N	RESISTOR	1.2kΩ,1/16W
	R261	NRSA63J-122N	RESISTOR	1.2kΩ,1/16W
	R262	NRSA63J-122N	RESISTOR	1.2kΩ,1/16W
	R263	NRSA63J-122N	RESISTOR	1.2kΩ,1/16W
	R264	QVZ3518-103	V RESISTOR,SEPARATION	
	R272	NRSA63J-391N	RESISTOR	390Ω,1/16W
	R273	NRSA63J-271N	RESISTOR	270Ω,1/16W
	R275	NRSA63J-561N	RESISTOR	560Ω,1/16W
	R276	NRSA63J-471N	RESISTOR	470Ω,1/16W
	R277	NRSA63J-331N	RESISTOR	330Ω,1/16W
	C1	QETF1CM-336	E CAPACITOR	33μF,16V
	C6	QETF1CM-106	E CAPACITOR	10μF,16V
	C7	QETF1HM-106	E CAPACITOR	10μF,50V
	C8	QCYA1HJ-102	CAPACITOR	0.001μF,50V
	C9	QCYA1HJ-471	CAPACITOR	470pF,50V
	C10	QCYA1HJ-471	CAPACITOR	470pF,50V
	C13	QCYA1HJ-222	CAPACITOR	0.0022μF,50V
	C14	QCYA1EK-223	CAPACITOR	0.022μF,25V
	C15	QETF1HM-474	E CAPACITOR	0.47μF,50V
	C17	QCYA1HJ-102	CAPACITOR	0.001μF,50V
	C18	QCYA1HJ-102	CAPACITOR	0.001μF,50V
	C101	QCFA1HZ-223	CAPACITOR	0.022μF,50V
	C102	QCYA1HK-472	CAPACITOR	0.0047μF,50V
	C103	QFV11HJ-104	F CAPACITOR	0.1μF,50V
	C104	QCYA1HK-102	CAPACITOR	0.001μF,50V
	C105	QCYA1HK-472	CAPACITOR	0.0047μF,50V
	C106	QFV11HJ-104	F CAPACITOR	0.1μF,50V
	C107	QCYA1HJ-471	CAPACITOR	470pF,50V
	C253	QEKF1HM-225	E CAPACITOR	2.2μF,50V
	C254	QEKF1HM-225	E CAPACITOR	2.2μF,50V
	C255	QETF1CM-226	E CAPACITOR	22μF,16V
	C257	NCF31HZ-473A	CAPACITOR	0.047μF,50V
	C258	QETC1CM-226	E CAPACITOR	22μF,16V
	C259	QCFA1CZ-224	CAPACITOR	0.22μF,16V
	C260	QEKF1HM-225	E CAPACITOR	2.2μF,50V
	C261	QEKF1HM-225	E CAPACITOR	2.2μF,50V
	C264	QETF1CM-336	E CAPACITOR	33μF,16V
	C265	QCYA1HK-473	CAPACITOR	0.047μF,50V
	C266	NCT06CH-220A	CAPACITOR	22pF,50V
	C267	QCYA1HK-473	CAPACITOR	0.047μF,50V
	C268	QCYA1HK-473	CAPACITOR	0.047μF,50V
	C269	QCYA1HK-473	CAPACITOR	0.047μF,50V
	C272	QETF1CM-226	E CAPACITOR	22μF,16V
	C273	QETF1CM-226	E CAPACITOR	22μF,16V
	C278	QCYA1HK-222	CAPACITOR	0.0022μF,50V
	C295	NCB31HK-221A	CAPACITOR	220pF,50V
	C296	NCB31HK-221A	CAPACITOR	220pF,50V
	C307	NCF31HZ-473A	CAPACITOR	0.047μF,50V
	L1	PU59152-100J	COIL	10μH
	L2	PU59152-100J	COIL	10μH
	L3	PU59152-100J	COIL	10μH
	CF201	PU52775	CERAMIC FILTER	
	CF202	PU52775-2	CERAMIC FILTER	
	CF203	PEVB0481	C DISCRIMINATER	
⚠	X202	PEVB0479	CRYSTAL RESONATOR	
	S1	PESW0525-Z	TACT SWITCH	
	T1	PELN0806	COIL	
	K206	PELN0662-Z	FERRATE BEADS	
	K207	PELN0662-Z	FERRATE BEADS	
	K209	PELN0662	FERRATE BEADS	
	K211	PELN0662	FERRATE BEADS	
	CL1	PU59311-3	WIRE CLAMP	
	J1	PEMC0824	DIN CONNECTOR	
	ETH1	PQ45208	EARTH PLATE	
	SCW1	SDST2605Z	SCREW,EARTH PLATE	
	SCW2	SDSF3010Z	SCREW,X2 TERMINAL BOARD	
⚠	TB1	PQ11596	TERMINAL BOARD (2)	
	WR1	PW30402-BB20M	COAXIAL CORD,TUNER-CONV	
	CN1	PEMC1101-014	CONNECTOR,(1-14)MAIN	
	CN2	PU60910-4	CONNECTOR,(1-4)SW REG	
	CN3	PU59555-6	CONNECTOR,(1-6)MAIN	
	CN4	PU59555-5	CONNECTOR,(1-5)MAIN	
	CN5	PU59555-2	CONNECTOR,(1-2)TERM	
	CN6	PU59555-2	CONNECTOR,(1-2)SW/JACK	
	CN7	PU59555-2	CONNECTOR,(1-2)MAIN	

– TUNER/DEMOD/P/V BOARD ASSY(S9200EH) –

	PWBA1	PB10773E	TU/DEM/P/V BOARD ASSEMBLY
⚠	TU1	PERF0123-01-01	TUNER
⚠	TU2	PERF0228	IF UNIT
⚠	RF1	PERF0157	RF CONVERTER
	IC201	CF70088	IC
	IC202	SM5840EP	IC
	IC203	TDA1312A	IC
	IC204	M5201L	IC
		or M5201AL	IC
	IC205	M5201L	IC
		or M5201AL	IC
	IC206	XRA15218	IC
	IC207	M5278L05	IC
	IC208	TDA8415	IC
		or TDA8416	IC
	IC209	UPC1391H	IC
	IC210	TC7S04F	IC
	IC401	MV1820E	IC
		or MV1820F	IC
	Q1	DTC114ES	TRANSISTOR
	Q2	2SB810H,J	TRANSISTOR
	Q3	2SC3068	TRANSISTOR
	Q12	2SK381(C)	FE TRANSISTOR
	Q13	DTC144ES	TRANSISTOR
	Q14	2SC1740S(S)	TRANSISTOR
	Q15	2SA933S(S)	TRANSISTOR
	Q16	2SC1740S(S)	TRANSISTOR

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	Q17	DTC144ES	TRANSISTOR	
	Q201	2SC4081(RS)	TRANSISTOR	
	Q202	2SC3931(BC)	TRANSISTOR	
	Q203	3SK181(5)	FE TRANSISTOR	
	Q204	DTC144EU	TRANSISTOR	
	Q205	DTC114TU	TRANSISTOR	
	Q206	FMG3	TRANSISTOR	
	Q208	DTA114TU	TRANSISTOR	
	Q209	2SA1532(C)	TRANSISTOR	
	Q210	DTC114EU	TRANSISTOR	
	Q211	2SD1450S,T	TRANSISTOR	
	D1	HZ30-2L-T2	ZENER DIODE	
	D2	1SS133	DIODE	
		or 1N4148M	DIODE	
	D3	1SS133	DIODE	
		or 1N4148M	DIODE	
	D4	1SS133	DIODE	
		or 1N4148M	DIODE	
	D201	DAP202U	DIODE	
	D202	DAP202U	DIODE	
	D203	1SS133	DIODE	
	R1	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
	R2	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
	R3	QRSA08J-331YN	RESISTOR	330Ω,1/10W
	R20	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R30	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
	R31	QRSA08J-683YN	RESISTOR	68kΩ,1/10W
	R32	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
	R33	QRSA08J-821YN	RESISTOR	820Ω,1/10W
	R34	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R35	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
	R36	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
	R37	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R38	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
	R39	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R40	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
	R202	NRSA63J-822N	RESISTOR	8.2kΩ,1/16W
	R204	NRSA63J-822N	RESISTOR	8.2kΩ,1/16W
	R205	NRSA63J-332N	RESISTOR	3.3kΩ,1/16W
	R206	NRSA63J-682N	RESISTOR	6.8kΩ,1/16W
	R207	NRSA63J-122N	RESISTOR	1.2kΩ,1/16W
	R208	NRSA63J-101N	RESISTOR	100Ω,1/16W
	R209	QRSA08J-821YN	RESISTOR	820Ω,1/10W
	R210	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R211	NRSA63J-124N	RESISTOR	120kΩ,1/16W
	R212	NRSA63J-560N	RESISTOR	56Ω,1/16W
	R213	NRSA63J-121N	RESISTOR	120Ω,1/16W
	R214	NRSA63J-473N	RESISTOR	47kΩ,1/16W
	R215	NRSA63J-104N	RESISTOR	100kΩ,1/16W
	R216	NRSA63J-271N	RESISTOR	270Ω,1/16W
	R218	QRSA08J-821YN	RESISTOR	820Ω,1/10W
	R222	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R223	NRVA63D-471N	RESISTOR	470Ω,1/16W
	R225	QRD161J-101	RESISTOR	100Ω,1/6W
	R231	NRSA63J-223N	RESISTOR	22kΩ,1/16W
	R232	NRSA63J-223N	RESISTOR	22kΩ,1/16W
	R233	NRSA63J-432N	RESISTOR	4.3kΩ,1/16W
	R234	NRSA63J-561N	RESISTOR	560Ω,1/16W
	R235	NRSA63J-152N	RESISTOR	1.5kΩ,1/16W
	R236	NRSA63J-152N	RESISTOR	1.5kΩ,1/16W
	R238	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R239	NRSA63J-273N	RESISTOR	27kΩ,1/16W
	R240	NRSA63J-561N	RESISTOR	560Ω,1/16W
	R241	NRSA63J-152N	RESISTOR	1.5kΩ,1/16W
	R242	NRSA63J-152N	RESISTOR	1.5kΩ,1/16W
	R243	NRSA63J-432N	RESISTOR	4.3kΩ,1/16W
	R245	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R246	NRSA63J-273N	RESISTOR	27kΩ,1/16W
	R247	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R248	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R249	NRSA63J-100N	RESISTOR	10Ω,1/16W
	R255	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R256	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R257	NRSA63J-101N	RESISTOR	100Ω,1/16W
	R259	NRSA63J-471N	RESISTOR	470Ω,1/16W
	R261	NRSA63J-473N	RESISTOR	47kΩ,1/16W
	R262	NRSA63J-473N	RESISTOR	47kΩ,1/16W
	R264	QVPA606-103	V RESISTOR,SEPARATION	
	R265	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
	R272	NRSA63J-391N	RESISTOR	390Ω,1/16W
	R273	NRSA63J-271N	RESISTOR	270Ω,1/16W
	R275	NRSA63J-561N	RESISTOR	560Ω,1/16W
	R276	NRSA63J-471N	RESISTOR	470Ω,1/16W
	R277	NRSA63J-331N	RESISTOR	330Ω,1/16W
	R278	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R279	NRSA63J-432N	RESISTOR	4.3kΩ,1/16W
	R280	NRSA63J-123N	RESISTOR	12kΩ,1/16W
	R281	NRSA63J-123N	RESISTOR	12kΩ,1/16W
	R282	QRD161J-432	RESISTOR	4.3kΩ,1/6W
	R283	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R285	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
	R290	NRSA63J-273N	RESISTOR	27kΩ,1/16W
	R291	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R292	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
	R293	NRSA63J-563N	RESISTOR	56kΩ,1/16W
	R294	NRSA63J-154N	RESISTOR	150kΩ,1/16W
	R295	NRSA63J-104N	RESISTOR	100kΩ,1/16W
	R296	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R298	NRSA63J-152N	RESISTOR	1.5kΩ,1/16W
	R301	QRD161J-332	RESISTOR	3.3kΩ,1/6W
	R401	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	C1	QETF1CM-336	E CAPACITOR	33μF,16V
	C6	QETF1CM-106	E CAPACITOR	10μF,16V
	C7	QETF1HM-106	E CAPACITOR	10μF,50V
	C8	QCYA1HJ-102	CAPACITOR	0.001μF,50V
	C9	QCYA1HJ-471	CAPACITOR	470pF,50V
	C10	QCTA1CH-471	CAPACITOR	470pF,16V
	C13	QCYA1HJ-222	CAPACITOR	0.0022μF,50V
	C14	QCYA1EK-223	CAPACITOR	0.022μF,25V
	C15	QETF1HM-474	E CAPACITOR	0.47μF,50V
	C16	QCVB1CM-103	CAPACITOR	0.01μF,16V
	C17	QCYA1HJ-102	CAPACITOR	0.001μF,50V
	C18	QCYA1HJ-102	CAPACITOR	0.001μF,50V
	C202	NCF31HZ-473A	CAPACITOR	0.047μF,50V
	C205	NCF31HZ-473A	CAPACITOR	0.047μF,50V
	C206	NCB31HK-222A	CAPACITOR	0.0022μF,50V
	C207	NCF31HZ-473A	CAPACITOR	0.047μF,50V
	C208	NCF31HZ-473A	CAPACITOR	0.047μF,50V
	C209	NCB31HK-222A	CAPACITOR	0.0022μF,50V
	C210	NCF31HZ-473A	CAPACITOR	0.047μF,50V
	C213	NCB31HK-103A	CAPACITOR	0.01μF,50V
	C214	NCB31HK-103A	CAPACITOR	0.01μF,50V
	C215	NCB31HK-103A	CAPACITOR	0.01μF,50V
	C216	NCB31HK-103A	CAPACITOR	0.01μF,50V

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	C217	NCB31HK-103A	CAPACITOR	0.01μF,50V
	C218	NCB31HK-103A	CAPACITOR	0.01μF,50V
	C219	NCF31HZ-103A	CAPACITOR	0.01μF,50V
	C220	NCF31HZ-473A	CAPACITOR	0.047μF,50V
	C221	QEKJ1CM-226	E CAPACITOR	22μF,16V
	C225	QCYA1EK-473	CAPACITOR	0.047μF,25V
	C226	QEKJ1CM-226	E CAPACITOR	22μF,16V
	C228	QCYA1HK-221	CAPACITOR	220pF,50V
	C233	QEKJ1HM-225	E CAPACITOR	2.2μF,50V
	C234	QEKJ1CM-226	E CAPACITOR	22μF,16V
	C236	QEKJ1HM-225	E CAPACITOR	2.2μF,50V
	C237	QCYA1EK-473	CAPACITOR	0.047μF,25V
	C238	QEKJ1CM-107	E CAPACITOR	100μF,16V
	C239	QFN31HJ-683	F CAPACITOR	0.068μF,50V
	C240	QFN31HJ-122	F CAPACITOR	0.0012μF,50V
	C241	QEKJ1CM-226	E CAPACITOR	22μF,16V
	C242	QCYA1EK-473	CAPACITOR	0.047μF,25V
	C243	QETC1HM-105	E CAPACITOR	1μF,50V
	C244	QFN31HJ-332	F CAPACITOR	0.0033μF,50V
	C245	QCYA1EK-473	CAPACITOR	0.047μF,25V
	C246	QFN31HJ-683	F CAPACITOR	0.068μF,50V
	C247	QFN31HJ-122	F CAPACITOR	0.0012μF,50V
	C248	QFN31HJ-332	F CAPACITOR	0.0033μF,50V
	C249	QETC1HM-105	E CAPACITOR	1μF,50V
	C251	QEKJ1CM-226	E CAPACITOR	22μF,16V
	C252	QETC1CM-226	E CAPACITOR	22μF,16V
	C253	QEKJ1HM-105	E CAPACITOR	1μF,50V
	C254	QEKJ1HM-475	E CAPACITOR	4.7μF,50V
	C255	QEKJ1CM-226	E CAPACITOR	22μF,16V
	C257	NCF31HZ-473A	CAPACITOR	0.047μF,50V
	C258	QETC1CM-226	E CAPACITOR	22μF,16V
	C259	QCFA1CZ-224	CAPACITOR	0.22μF,16V
	C260	QEKJ1HM-225	E CAPACITOR	2.2μF,50V
	C261	QEKJ1HM-225	E CAPACITOR	2.2μF,50V
	C264	QETF1CM-336	E CAPACITOR	33μF,16V
	C265	QCYA1EK-473	CAPACITOR	0.047μF,25V
	C266	NCT06CH-220A	CAPACITOR	22pF,50V
	C267	QCYA1EK-473	CAPACITOR	0.047μF,25V
	C268	QCYA1EK-473	CAPACITOR	0.047μF,25V
	C269	QCYA1EK-473	CAPACITOR	0.047μF,25V
	C271	QEKJ1CM-226	E CAPACITOR	22μF,16V
	C272	QEKJ1CM-226	E CAPACITOR	22μF,16V
	C273	QEKJ1CM-226	E CAPACITOR	22μF,16V
	C278	QCYA1EK-473	CAPACITOR	0.047μF,25V
	C279	NCF31HZ-473A	CAPACITOR	0.047μF,50V
	C282	QEKJ1HM-105	E CAPACITOR	1μF,50V
	C283	QEKJ1HM-105	E CAPACITOR	1μF,50V
	C290	NCB31HK-103A	CAPACITOR	0.01μF,50V
	C291	NCF31HZ-473A	CAPACITOR	0.047μF,50V
	C292	NCT06CH-680A	CAPACITOR	68pF,50V
	C293	NCB31HK-102A	CAPACITOR	0.001μF,50V
	C294	NCF31HZ-473A	CAPACITOR	0.047μF,50V
	C297	QCYA1HK-221	CAPACITOR	220pF,50V
	C298	QCYA1HK-221	CAPACITOR	220pF,50V
	C299	QCYA1HK-221	CAPACITOR	220pF,50V
	C301	NCB31HK-221A	CAPACITOR	220pF,50V
	C302	NCB31HK-221A	CAPACITOR	220pF,50V
	C303	QCYA1HK-221	CAPACITOR	220pF,50V
	C304	QCYA1HK-221	CAPACITOR	220pF,50V
	C305	NCB31HK-221A	CAPACITOR	220pF,50V
	C306	QCYA1EK-473	CAPACITOR	0.047μF,25V
	C307	NCF31HZ-473A	CAPACITOR	0.047μF,50V

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	C310	QEK41HM-105	E CAPACITOR	1μF,50V
	C311	QEKJ1HM-105	E CAPACITOR	1μF,50V
	C312	QEKJ1HM-105	E CAPACITOR	1μF,50V
	C401	QCTA1CH-160	CAPACITOR	16pF,16V
	C402	QCTA1CH-160	CAPACITOR	16pF,16V
	C403	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C404	QETC1CM-476	E CAPACITOR	47μF,16V
	C405	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C406	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C407	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C409	QER61HM-104	E CAPACITOR	0.1μF,50V
	C410	QCVB1CM-103	CAPACITOR	0.01μF,16V
	C411	QCYA1EK-473	CAPACITOR	0.047μF,25V
	C412	QCYA1HK-681	CAPACITOR	680pF,50V
	L1	PU59152-100J	COIL	10μH
	L2	PU59152-100J	COIL	10μH
	L3	PU59152-100J	COIL	10μH
	L206	PU59152-120J	COIL	12μH
	L401	PU48530-100J	COIL	10μH
	LPF201	PU60464	BAND PASS FILTER	
	CF201	PU52775	CERAMIC FILTER	
	CF202	PU52775-2	CERAMIC FILTER	
	CF203	PEVB0481	C DISCRIMINATER	
	LC201	PU59736-102	N FILTER	
	LC203	PU59736-102	N FILTER	
	LC401	PU60950-101G	N FILTER	
	LC402	PU60950-101G	N FILTER	
	LC403	PU60950-101G	N FILTER	
	LC404	PU59736-103	N FILTER	
⚠	X201	PEVB0484	CRYSTAL RESONATOR	
⚠	X202	PEVB0479	CRYSTAL RESONATOR	
⚠	X401	PEVB0480	CRYSTAL RESONATOR	
	S1	PESW0525-Z	TACT SWITCH	
	T1	PELN0806	COIL	
	K207	PELN0662-Z	FERRATE BEADS	
	K209	PELN0662-Z	FERRATE BEADS	
	CL1	PU59311-3	WIRE CLAMP	
	ETH1	PQ45208	EARTH PLATE	
	J1	PEMC0824	DIN CONNECTOR	
	ETH1	PQ45208	EARTH PLATE	
	SCW1	SDST2605Z	SCREW,EARTH PLATE	
	SCW2	SDSF3010Z	SCREW,X2 TERMINAL BOARD	
	SLD1	PU61069-1-2	SHIELD CASE	
	SLD2	PU61070	SHIELD COVER	
	SLD3	PU61071	SHIELD PLATE	
	SLD4	PQ34522	SHIELD CASE	
	SLD5	PQ34523	SHIELD FRAME	
	SLD6	PQ34524	SHIELD PLATE	
⚠	TB1	PQ11596-3	TERMINAL BPARD (2)	
	WR1	PW30402-BB20M	COAXIAL CORD,TUNER-CONV	
	CN1	PEMC1101-014	CONNECTOR,(1-4)MAIN	
	CN2	PU60910-4	CONNECTOR,(1-4)SW REG	
	CN3	PU59555-6	CONNECTOR,(1-6)MAIN	
	CN4	PU59555-7	CONNECTOR,(1-7)MAIN	
	CN5	PU59555-2	CONNECTOR,(1-2)SW/JACK	
	CN6	PU59555-2	CONNECTOR,(1-2)MAIN	
	CN7	PU59555-2	CONNECTOR,(1-2)GND TERM	

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AUDIO UNIT BOARD ASSY <09>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	PWBA1	PB10613C	AUDIO UNIT BOARD ASSEMBLY	
⚠	IC1	JCP0038	IC	
⚠		or JCP0038-B	IC	
	Q1	2SC2412K(R)	TRANSISTOR	
	Q2	2SC2412K(R)	TRANSISTOR	
	D1	DAN202K	DIODE	
	R1	NRSA63J-475N	RESISTOR	4.7MΩ,1/16W
	R2	NRSA63J-511N	RESISTOR	510Ω,1/16W
	R3	NRSA63J-472N	RESISTOR	4.7kΩ,1/16W
	R4	NRSA63J-513N	RESISTOR	51kΩ,1/16W
	R5	NVP1301-473NU	V RESISTOR,L DEVIATION	
	R6	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R8	NRSA63J-822N	RESISTOR	8.2kΩ,1/16W
	R9	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R10	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R11	NVP1301-153NZ	V RESISTOR,L CARRIER	
	R12	NRSA63J-105N	RESISTOR	1MΩ,1/16W
	R13	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R14	NRSA63J-183N	RESISTOR	18kΩ,1/16W
	R16	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R18	NRSA63J-303N	RESISTOR	30kΩ,1/16W
	R19	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
	R20	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
	R21	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R22	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R23	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R24	NRSA63J-752N	RESISTOR	7.5kΩ,1/16W
	R25	NVP1301-153NZ	V RESISTOR,R CARRIER	
	R26	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R27	NRSA63J-822N	RESISTOR	8.2kΩ,1/16W
	R29	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
	R30	NVP1301-473NU	V RESISTOR,R DEVIATION	
	R31	NRSA63J-513N	RESISTOR	51kΩ,1/16W
	R32	NRSA63J-472N	RESISTOR	4.7kΩ,1/16W
	R33	NRSA63J-511N	RESISTOR	510Ω,1/16W
	R34	NRSA63J-475N	RESISTOR	4.7MΩ,1/16W
	R35	NRSA63J-514N	RESISTOR	510kΩ,1/16W
	R36	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R38	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R41	NRSA63J-101N	RESISTOR	100Ω,1/16W
	R42	NRSA63J-101N	RESISTOR	100Ω,1/16W
	R43	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R44	NRSA63J-154N	RESISTOR	150kΩ,1/16W
	R45	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R46	NRSA63J-103N	RESISTOR	10kΩ,1/16W
	R47	NRSA63J-154N	RESISTOR	150kΩ,1/16W
	R48	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R49	NRSA63J-334N	RESISTOR	330kΩ,1/16W
	R50	NRSA63J-473N	RESISTOR	47kΩ,1/16W
	R51	NRSA63J-473N	RESISTOR	47kΩ,1/16W
	R52	NRSA63J-104N	RESISTOR	100kΩ,1/16W
	R54	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R55	NRSA63J-102N	RESISTOR	1kΩ,1/16W
	R56	NRSA63J-101N	RESISTOR	100Ω,1/16W
	R57	NRSA63J-101N	RESISTOR	100Ω,1/16W
	C1	NCB31EK-103A	CAPACITOR	0.01µF,25V
	C2	QETC1AM-336	E CAPACITOR	33µF,10V
	C3	QFLC1HJ-473Z	F CAPACITOR	0.047µF,50V
	C4	QETC1HM-225	E CAPACITOR	2.2µF,50V
	C5	QFLC1HJ-333Z	F CAPACITOR	0.033µF,50V
	C6	QETC1AM-476	E CAPACITOR	47µF,10V
	C7	QETC1CM-106	E CAPACITOR	10µF,16V
	C8	QFLC1HJ-103Z	F CAPACITOR	0.01µF,50V
	C9	QETC0JM-107	E CAPACITOR	100µF,6.3V
	C10	NCB31HK-102A	CAPACITOR	0.001µF,50V
	C11	QFLC1HJ-104Z	F CAPACITOR	0.1µF,50V
	C12	QFLC1HJ-223Z	F CAPACITOR	0.022µF,50V
	C13	NCB31HK-821A	CAPACITOR	820pF,50V
	C14	QFLC1HJ-392Z	F CAPACITOR	0.0039µF,50V
	C15	QFLC1HJ-333Z	F CAPACITOR	0.033µF,50V
	C16	QETC1HM-105	E CAPACITOR	1µF,50V
	C18	NCB31HK-561A	CAPACITOR	560pF,50V
	C19	NCF31CZ-104A	CAPACITOR	0.1µF,16V
	C20	NCS31HJ-101A	CAPACITOR	100pF,50V
	C21	NCS31HJ-101A	CAPACITOR	100pF,50V
	C22	QFLC1HJ-392Z	F CAPACITOR	0.0039µF,50V
	C23	NCB31HK-821A	CAPACITOR	820pF,50V
	C24	QFLC1HJ-223Z	F CAPACITOR	0.022µF,50V
	C25	QFLC1HJ-104Z	F CAPACITOR	0.1µF,50V
	C26	NCB31HK-102A	CAPACITOR	0.001µF,50V
	C27	QETC0JM-107	E CAPACITOR	100µF,6.3V
	C28	QFLC1HJ-103Z	F CAPACITOR	0.01µF,50V
	C29	QETC1CM-106	E CAPACITOR	10µF,16V
	C30	QETC1AM-476	E CAPACITOR	47µF,10V
	C31	QFLC1HJ-333Z	F CAPACITOR	0.033µF,50V
	C32	QETC1HM-225	E CAPACITOR	2.2µF,50V
	C33	QFLC1HJ-473Z	F CAPACITOR	0.047µF,50V
	C34	QETC1AM-336	E CAPACITOR	33µF,10V
	C35	NCB31EK-103A	CAPACITOR	0.01µF,25V
	C36	QETC1CM-106	E CAPACITOR	10µF,16V
	C37	QETC1CM-106	E CAPACITOR	10µF,16V
	C38	QETC1CM-226	E CAPACITOR	22µF,16V
	C39	QETC1CM-106	E CAPACITOR	10µF,16V
	C40	QETC1CM-106	E CAPACITOR	10µF,16V
	C41	QETC0JM-107	E CAPACITOR	100µF,6.3V
	C42	QETC0JM-107	E CAPACITOR	100µF,6.3V
	C43	QETC1AM-107	E CAPACITOR	100µF,10V
	C44	QETC1CM-476	E CAPACITOR	47µF,16V
	C45	QETC1AM-476	E CAPACITOR	47µF,10V
	C46	QETC1CM-106	E CAPACITOR	10µF,16V
	C47	NCB31EK-103A	CAPACITOR	0.01µF,25V
	C48	QETC1CM-106	E CAPACITOR	10µF,16V
	C49	QETC0JM-476	E CAPACITOR	47µF,6.3V
	C50	NCF31CZ-104A	CAPACITOR	0.1µF,16V
	C51	QFLC1HJ-822Z	F CAPACITOR	0.0082µF,50V
	C52	QFLC1HJ-822Z	F CAPACITOR	0.0082µF,50V
	C53	QETC1HM-225	E CAPACITOR	2.2µF,50V
	C54	QETC1CM-106	E CAPACITOR	10µF,16V
	C55	NCF31CZ-104A	CAPACITOR	0.1µF,16V
	C56	QETC1HM-225	E CAPACITOR	2.2µF,50V
	C57	QETC1CM-106	E CAPACITOR	10µF,16V
	C58	NCF31CZ-104A	CAPACITOR	0.1µF,16V
	C59	QETC1HM-105	E CAPACITOR	1µF,50V
	C60	NCF31CZ-104A	CAPACITOR	0.1µF,16V
	C61	NCF31CZ-104A	CAPACITOR	0.1µF,16V
	L1	PELN0530-101JZ	COIL	100µH
	L2	PELN0530-101JZ	COIL	100µH
	L3	PELN0530-101JZ	COIL	100µH
	BPF1	PU60610	BAND PASS FILTER (1.4MHZ)	

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION
BPF2	PU60611	BAND PASS FILTER (1.8MHZ)
JP1	PEMC0919-126	PIN HEADER
JP2	PEMC0919-126	PIN HEADER

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A/C HEAD BOARD <12>

PWB1	PB40046-01-02	AUDIO CONTROL HEAD BOARD
CN201	PU59555-104	CONNECTOR,(1-4)MAIN
CN202	PU59555-103	CONNECTOR,(1-3)MAIN

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DISPLAY BOARD ASSEMBLY <28>

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION
PWBA1	PB10826E1	DISPLAY BOARD ASSY,S9200EG
	PB10826F1	DISPLAY BOARD ASSY,S9200EH
IC1	UPD16311GC(K)	IC
	or UPD16311GC(P)	IC
	or UPD16311GC(E)	IC
	or UPD16311GC(P)	IC
	or UPD16311GC(E)	IC
IC2	GP1U801X	IR DETECT UNIT
	or GP1U541X	IR DETECT UNIT
D1	RD4.7ES-T1B2	ZENER DIODE
	or MTZ4.7B	ZENER DIODE
D2	1SS132Y	DIODE
	or 1N4148M	DIODE
D3	1SS132Y	DIODE
	or 1N4148M	DIODE
D4	1SS132Y	DIODE
	or 1N4148M	DIODE
D5	1SS132Y	DIODE
	or 1N4148M	DIODE
D6	1SS132Y	DIODE
	or 1N4148M	DIODE
D7	1SS132Y	DIODE
	or 1N4148M	DIODE
D8	SLH-34DC3F	LE DIODE,HYPER BASS
D9	SLH-34MC3F	LE DIODE,S-VHS
D10	SLH-34VC3F	LE DIODE,PAL PLUS
D11	1SS132Y	DIODE
	or 1N4148M	DIODE
D18	1SS132Y	DIODE,S9200EH
	or 1N4148M	DIODE,S9200EH
D20	1SS132Y	DIODE
	or 1N4148M	DIODE
D21	1SS132Y	DIODE
	or 1N4148M	DIODE
D24	1SS132Y	DIODE,S9200EH
	or 1N4148M	DIODE,S9200EH
D25	1SS132Y	DIODE,VCR+
	or 1N4148M	DIODE
R1	QRD161J-103	RESISTOR 10kΩ,1/6W
R2	QRD161J-333	RESISTOR 33kΩ,1/6W
R3	QRD161J-333	RESISTOR 33kΩ,1/6W
R4	QRD161J-333	RESISTOR 33kΩ,1/6W
R5	QRD161J-333	RESISTOR 33kΩ,1/6W
R6	QRD161J-472	RESISTOR 4.7kΩ,1/6W
R7	QRD161J-472	RESISTOR 4.7kΩ,1/6W
R8	QRD161J-102	RESISTOR 1kΩ,1/6W
R9	QRD161J-151	RESISTOR,S9200EG 150Ω,1/6W
R10	QRD161J-103	RESISTOR 10kΩ,1/6W
R11	QRD161J-333	RESISTOR 33kΩ,1/6W
R12	QRD161J-103	RESISTOR 10kΩ,1/6W
R13	QRD161J-331	RESISTOR 330Ω,1/6W
R14	QRD161J-151	RESISTOR 150Ω,1/6W
R15	QRD161J-105	RESISTOR 1MΩ,1/6W
R18	QRD161J-331	RESISTOR 330Ω,1/6W
RA1	QRB045J-333XM	RESISTOR ARRAY 33kΩ,1/8W
C1	QEK60JM-107	E CAPACITOR 100μF,6.3V
C2	QEK61HM-106	E CAPACITOR 10μF,50V
C3	QCFB1HZ-473	CAPACITOR 0.047μF,50V
C4	QCFB1HZ-473	CAPACITOR 0.047μF,50V
C5	QCSB1HJ-330	CAPACITOR 33pF,50V
C7	QCVB1CM-103	CAPACITOR,S9200EG 0.01μF,16V
C8	QCSB1HJ-330	CAPACITOR 33pF,50V
C9	QCFB1HZ-104	CAPACITOR 0.1μF,50V
C10	QEK60JM-476	E CAPACITOR 47μF,6.3V
C11	QCVB1CM-103	CAPACITOR 0.01μF,16V
C12	QEK61AM-227	E CAPACITOR 220μF,10V
L1	PU48530-101J	COIL 100μH
S1	PESW0525-02Z	TACT SWITCH,CH+
S2	PESW0525-02Z	TACT SWITCH,REC/ITR
S3	PESW0525-02Z	TACT SWITCH,PAUSE
S4	PESW0525-02Z	TACT SWITCH,CH-
S5	PESW0525-02Z	TACT SWITCH,PLAY
S6	PESW0525-02Z	TACT SWITCH,STOP/EJECT
S9	PESW0525-02Z	TACT SWITCH,SP/LP
S18	PESW0525-02Z	TACT SWITCH,INSERT
S19	PESW0525-02Z	TACT SWITCH,MIX
S20	PESW0525-02Z	TACT SWITCH,HYPER BASS
S30	PESW0525-02Z	TACT SWITCH,A.DUB
S31	PESW0525-02Z	TACT SWITCH, DISP OFF S9200EH
S32	PESW0525-02Z	TACT SWITCH,TV/VIDEO S9200EG
S33	PESW0525-02Z	TACT SWITCH,S/AV
S34	PESW0525-02Z	TACT SWITCH,SIMUL
S35	PESW0525-02Z	TACT SWITCH,S-VHS
S51	PESW0551	SLIDE SWITCH,TV SOUND S9200EH
S53	PESW0551	SLIDE SWITCH,EDIT
S54	PESW0551	SLIDE SWITCH,16:9 REC
CL1	PU59311-2	WIRE CLAMP,J1 J2
FDP1	PEDP0106	FLUORESCENT DISPLAY PANEL
HD1	PQM30038-2-2	LED HOLDER,X3 D8 D9 D10
HD2	PQ31334-1-2	DISPLAY HOLDER (R)
HD3	PQ31333-1-2	DISPLAY HOLDER (L)
J1	PW30219-0662614	WIRE
J2	PW30219-0772414	WIRE
CN1	PEMC1101-108	CONNECTOR,(1-8)MAIN
CN2	PEMC0889-011	CONNECTOR,(1-11)SW/JACK
CN3	PU60910-4	CONNECTOR,(1-4)SW REG
CN5	PU59555-2	CONNECTOR,(2-3)MAIN

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SWITCH/JACK BOARD ASSEMBLY <36>

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
PWBA2	PB10826F2-01	SW/JACK BOARD ASSY,S9200EH	
	PB10826E2	SW/JACK BOARD ASSY,S9200EG	
Q101	DTC114ES	TRANSISTOR	
D101	SLH-34VC3F	LE DIODE,POWER	
D110	1SS132Y	DIODE,S9200EH	
	or 1N4148M	DIODE,S9200EH	
D111	1SS132Y	DIODE,S9200EH	
	or 1N4148M	DIODE,S9200EH	
R101	QRD161J-331	RESISTOR	330Ω,1/6W
R102	QRD161J-103	RESISTOR	10kΩ,1/6W
C105	QCFB1EZ-223	CAPACITOR,S9200EG	0.022μF,25V
C106	QCFB1EZ-223	CAPACITOR,S9200EG	0.022μF,25V
LC101	PU59885-102	N FILTER	
LC102	PU59885-102	N FILTER	
S10	PESW0525-02Z	TACT SWITCH,CANCEL	
S11	PESW0525-02Z	TACT SWITCH,TIMER	
S12	PESW0525-02Z	TACT SWITCH,POWER	
S13	PESW0525-02Z	TACT SWITCH,START +	
S14	PESW0525-02Z	TACT SWITCH,START −	
S15	PESW0525-02Z	TACT SWITCH,STOP +	
S16	PESW0525-02Z	TACT SWITCH,STOP −	
HD1	PQ43214	LED HOLDER,D101	
JA101	PU60659	MINI JACK,R PAUSE	
JA102	PU60664-3	MINI JACK,MIC	
JA103	PEMC0937	MINI DIN CONN,S IN	
JA104	PEMC1008	PIN JACK(SW),RCA	
CN101	PU59555-2	CONNECTOR,(1-2)TUNER	
CN102	PEMC1101-104	CONNECTOR,(1-4)MAIN	
CN103	PU59555-3	CONNECTOR,(1-3)MAIN	
CN104	PU59555-6	CONNECTOR,(1-6)TERMINAL	
CN105	PEMC0825-011	CONNECTOR,(1-11)DISPLAY	
CN106	PU59555-3	CONNECTOR,(1-3)MAIN	

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PRE/REC BOARD ASSEMBLY <43>

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
PWBA	PB20648A-02	PRE/REC BOARD ASSEMBLY	
IC1	JCP0047-WE	IC	
IC201	AN3380NK	IC	
Q2	2SC4081(QRS)	TRANSISTOR	
Q3	2SC4081(QRS)	TRANSISTOR	
Q4	DTA144EU	TRANSISTOR	
Q5	2SC4081(QRS)	TRANSISTOR	
Q6	2SA1576(QR)	TRANSISTOR	
Q7	2SA1576(QR)	TRANSISTOR	
Q8	2SC4081(QRS)	TRANSISTOR	
Q9	2SC4081(QRS)	TRANSISTOR	
Q10	2SA1576(QR)	TRANSISTOR	
Q11	2SC4081(QRS)	TRANSISTOR	
Q12	2SC4081(QRS)	TRANSISTOR	
Q201	DTC124TU	TRANSISTOR	
Q202	DTC124TU	TRANSISTOR	
Q203	DTC114WU	TRANSISTOR	
Q204	2SC4081(QRS)	TRANSISTOR	
Q205	DTA114EU	TRANSISTOR	
Q206	DTC114WU	TRANSISTOR	
Q210	DTC144WU	TRANSISTOR	
Q211	DTA114EU	TRANSISTOR	
Q212	DTC124TU	TRANSISTOR	
Q301	2SA933S(QRS)	TRANSISTOR	
Q302	2SC1741S(QR)	TRANSISTOR	
Q303	2SA933S(Q)	TRANSISTOR	
Q304	2SD639R	TRANSISTOR	
Q305	2SD639R	TRANSISTOR	
D1	DAN202U	DIODE	
D4	DAN202U	DIODE	
D201	DAN202U	DIODE	
D203	DAN202U	DIODE	
D204	DAN202U	DIODE	
D301	UZ8.2BSC	ZENER DIODE	
	or RD8.2ES-T1B3	ZENER DIODE	
D302	DAN202U	DIODE	
R1	QRSA08J-160YN	RESISTOR	16Ω,1/10W
R2	QRSA08J-270YN	RESISTOR	27Ω,1/10W
R3	QRSA08J-510YN	RESISTOR	51Ω,1/10W
R4	QRSA08J-470YN	RESISTOR	47Ω,1/10W
R7	QRSA08J-271YN	RESISTOR	270Ω,1/10W
R8	QRSA08J-271YN	RESISTOR	270Ω,1/10W
R9	NRVA62D-203N	RESISTOR	20kΩ,1/16W
R10	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R14	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R15	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R16	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R17	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R18	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R19	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
R20	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R65	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R66	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R67	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R68	QRSA08J-162YN	RESISTOR	1.6kΩ,1/10W
R69	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R70	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R71	NRVA62D-123N	RESISTOR	12kΩ,1/16W
R72	NRVA62D-392N	RESISTOR	3.9kΩ,1/16W
R73	QRSA08J-301YN	RESISTOR	300Ω,1/10W
R74	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R75	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
R76	NVP1311-153N	V RESISTOR,V REC FM	
R77	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R78	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R79	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
R80	QRSA08J-151YN	RESISTOR	150Ω,1/10W
R82	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R83	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R84	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R201	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R202	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R203	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R204	QRSA08J-274YN	RESISTOR	270kΩ,1/10W
R205	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
R206	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R207	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R208	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R209	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	R210	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R211	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
	R212	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R214	QRSA08J-560YN	RESISTOR	56Ω,1/10W
	R215	QRSA08J-560YN	RESISTOR	56Ω,1/10W
	R216	QVZ3521-331Z	V RESISTOR,A REC FM	
	R217	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
	R218	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
	R223	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
	R224	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R301	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R302	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R303	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R304	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R305	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
	R306	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
	R307	QRSA08J-121YN	RESISTOR	120Ω,1/10W
	R308	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
	R309	QRSA08J-121YN	RESISTOR	120Ω,1/10W
	R310	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	C1	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C2	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C3	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C4	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C8	QCTA1CH-8R0	CAPACITOR	8pF,16V
	C9	QCTA1CH-180	CAPACITOR	18pF,16V
	C10	QCTA1CH-130	CAPACITOR	13pF,16V
	C13	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C14	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C15	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C16	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C19	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C20	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C21	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C22	QEKF0JM-107	E CAPACITOR	100μF,6.3V
	C23	QETC0JM-107	E CAPACITOR	100μF,6.3V
	C24	QCFA1HZ-223	CAPACITOR	0.022μF,50V
	C26	QCFA1CZ-474	CAPACITOR	0.47μF,16V
	C28	QCFA1CZ-105	CAPACITOR	1μF,16V
	C29	QCYA1HJ-103	CAPACITOR	0.01μF,50V
	C30	QCYA1HJ-103	CAPACITOR	0.01μF,50V
	C33	QCSA1HJ-222	CAPACITOR	0.0022μF,50V
	C34	QCSA1HJ-222	CAPACITOR	0.0022μF,50V
	C35	QCYA1HJ-103	CAPACITOR	0.01μF,50V
	C37	QEKF0JM-107	E CAPACITOR	100μF,6.3V
	C38	QCSA1HJ-331	CAPACITOR	330pF,50V
	C39	QCSA1HJ-121	CAPACITOR	120pF,50V
	C41	QCYA1HJ-103	CAPACITOR	0.01μF,50V
	C43	QCYA1HJ-103	CAPACITOR	0.01μF,50V
	C44	QCTA1CH-100	CAPACITOR	10pF,16V
	C45	QCTA1CH-100	CAPACITOR	10pF,16V
	C62	QCSA1HJ-121	CAPACITOR	120pF,50V
	C63	QCFA1HZ-104	CAPACITOR	0.1μF,50V
	C64	QCYA1HJ-103	CAPACITOR	0.01μF,50V
	C65	QCSA1HJ-271	CAPACITOR	270pF,50V
	C66	QCSA1HJ-151	CAPACITOR	150pF,50V
	C67	QCSA1HJ-560	CAPACITOR	56pF,50V
	C70	QCFA1HZ-223	CAPACITOR	0.022μF,50V
	C75	QCYA1HJ-103	CAPACITOR	0.01μF,50V
	C79	QCSA1HJ-330	CAPACITOR	33pF,50V
	C82	QCSA1HJ-390	CAPACITOR	39pF,50V
	C83	QCYA1HJ-103	CAPACITOR	0.01μF,50V
	C84	QCYA1HJ-103	CAPACITOR	0.01μF,50V
	C201	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C202	QCSA1HJ-391	CAPACITOR	390pF,50V
	C203	QCSA1HJ-561	CAPACITOR	560pF,50V
	C204	QCSA1HJ-102	CAPACITOR	0.001μF,50V
	C205	QCSA1HJ-561	CAPACITOR	560pF,50V
	C206	QCSA1HJ-102	CAPACITOR	0.001μF,50V
	C207	QCFA1CZ-224	CAPACITOR	0.22μF,16V
	C208	QCSA1HJ-391	CAPACITOR	390pF,50V
	C209	QEKF0JM-107	E CAPACITOR	100μF,6.3V
	C210	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C211	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C213	QCSA1HJ-331	CAPACITOR	330pF,50V
	C214	QCSA1HJ-330	CAPACITOR	33pF,50V
	C215	QCSA1HJ-102	CAPACITOR	0.001μF,50V
	C216	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C217	QCSA1HJ-102	CAPACITOR	0.001μF,50V
	C218	QCSA1HJ-102	CAPACITOR	0.001μF,50V
	C220	QEKF1AM-476	E CAPACITOR	47μF,10V
	C221	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C224	QCFA1CZ-224	CAPACITOR	0.22μF,16V
	C225	QCSA1HK-101	CAPACITOR	100pF,50V
	C301	QCFA1HZ-103	CAPACITOR	0.01μF,50V
	C302	QCC11EJ-123	CAPACITOR	0.012μF,25V
	C303	QCSA1HJ-560	CAPACITOR	56pF,50V
	C304	QCSA1HJ-820	CAPACITOR	82pF,50V
	C305	QCFA1HZ-103	CAPACITOR	0.01μF,50V
	C306	QCSA1HJ-820	CAPACITOR	82pF,50V
	C308	QCT05UJ-181	CAPACITOR	180pF
	C309	QCT25UJ-330	CAPACITOR	33pF
	L1	PU54223-101K	COIL	100μH
	L2	PU48530-101K	COIL	100μH
	L3	PU54223-101K	COIL	100μH
	L4	PU58201-181J	COIL	180μH
	L5	PU58201-330J	COIL	33μH
	L11	PU58201-330J	COIL	33μH
	L12	PU58201-101J	COIL	100μH
	L13	PU58201-820J	COIL	82μH
	L201	PELN0530-101JZ	COIL	100μH
	L202	PU59988-221J	COIL	220μH
	L301	PU48530-560J	COIL	56μH
	L302	PU48530-3R3K	COIL	3.3μH
	L303	PU48530-3R3K	COIL	3.3μH
	L304	PU59152-101J	COIL	100μH
⚠	T301	PU56175	S.TRANS	
	BKT1	PQ21507-1-1	SHIELD BRACKET	
	SLD1	PQ44851	SHIELD CASE	
	SLD2	PQ44852	SHIELD COVER	
	SLD3	PQ21507-1-1	SHIELD BRACKET	
	CN1	PEMC1102-116	CONNECTOR,(1-16)MAIN	
	CN2	PU59974-13	CONNECTOR,(1-13) UPPER DRUM	
	CN3	PU59555-103	CONNECTOR,(1-3)SW REG	
	CN201	PEMC1102-109	CONNECTOR,(1-9)MAIN	

DECK TERMINAL BOARD ASSEMBLY <51>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	PWBA1	PB10715A1-05	DECK TERMINAL BOARD ASSEMBLY	
	IC1	M66007P	IC	
	D1	GL381J	LE DIODE	
	D2	RD6.2ES-T1B1	ZENER DIODE	
	D3	1SS133	DIODE	
	D4	1SS133	DIODE	
	R1	QRD161J-102	RESISTOR	1kΩ,1/6W
	R2	QRD161J-102	RESISTOR	1kΩ,1/6W
	R3	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R4	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R5	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R6	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R7	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R8	QRD161J-103	RESISTOR	10kΩ,1/6W
	R9	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R10	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R11	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R12	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R13	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R16	QRD161J-221	RESISTOR	220Ω,1/6W
	R17	QRD161J-820	RESISTOR	82Ω,1/6W
	R18	QRD161J-221	RESISTOR	220Ω,1/6W
	R20	QRD161J-102	RESISTOR	1kΩ,1/6W
	R21	QRD161J-223	RESISTOR	22kΩ,1/6W
	R22	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R23	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R24	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R25	QRD161J-472	RESISTOR	4.7kΩ,1/6W
	R26	QRD161J-563	RESISTOR	56kΩ,1/6W
	R27	QRD161J-103	RESISTOR	10kΩ,1/6W
	R28	QRD161J-103	RESISTOR	10kΩ,1/6W
	R29	QRD161J-103	RESISTOR	10kΩ,1/6W
	R30	QRD161J-103	RESISTOR	10kΩ,1/6W
	C3	QCBB1HJ-101	CAPACITOR	100pF,50V
	C4	QCVB1CM-103	CAPACITOR	0.01μF,16V
	S1	PU61319	REC SAFETY SWITCH	
	S3	PESW0674	S CASS.SWITCH,X2 S3 S5	
	PS1	PU61318	REEL SENSOR	
	PS2	PU61318	REEL SENSOR	
	TH1	NTH5D473KB	THERMISTOR,X2(TH1 TH3)	
	OHT1	PU61321-1-2	TAPE SENSOR,X2 Q1 Q2	
	WR1	PW30218-04416	WIRE,DECK TERNIMAL CN6	
	CN1	PEMC0918-016	CONNECTOR,(1-16)MAIN	
	CN2	PU60642	CONNECTOR,(1-7)CAPSTAN MDA	
	CN6	PU59555-4	CONNECTOR,(1-4)LOADING MDA	

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LOARDING MDA BOARD ASSEMBLY <55>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	PWBA2	PB10715A2	LOADING MDA BOARD ASSY	
⚠	IC101	BA6418N	IC	
⚠		or XRA6418N	IC	
	C101	QER61CM-476	E CAPACITOR	47μF,16V
	CN101	PU59555-104	CONNECTOR,(1-4)DECK TERMINAL	

PAL PLUS BOARD ASSEMBLY <61>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION
	PWBA	PB10961A	PALPLUS BOARD ASSEMBLY
	IC1	M51279FP	IC
	IC2	CXA1727Q	IC
	IC3	TC74HC4053AF	IC
	IC4	TC74HC4053AF	IC
	IC5	TC74HC4053AF	IC
	IC6	TC74HC4053AF	IC
	IC7	UPC4062G2	IC
	IC8	BU4066BCF	IC
	IC9	BA10324AF	IC
	IC11	JCP0062	IC
	IC12	TC74HCU04AF	IC
	IC13	TC74HC161AF	IC
		or MC74HC161AF	IC
	IC14	TC74HC74AF	IC
	IC15	TC74HC161AF	IC
		or MC74HC161AF	IC
	IC16	TC74HC02AF	IC
		or MC74HC02AF	IC
	IC17	TC74HC4053AF	IC
	IC18	TC74HC00AF	IC
	IC19	TC74HC00AF	IC
	IC20	TC74HC00AF	IC
	IC21	TC74HC08AF	IC
	IC22	TC74HC10AF	IC
	IC23	TC74HC86AF	IC
	IC24	TC74HC74AF	IC
	IC25	TC74HC74AF	IC
	IC26	TC74HC74AF	IC
	IC27	TC74HC74AF	IC
	IC28	TC74HC161AF	IC
		or MC74HC161AF	IC
	IC29	TC74HC74AF	IC
	IC31	TC74HC10AF	IC
	IC32	TC74HC04AF	IC
	Q7	2SC4081(RS)	TRANSISTOR
	Q8	2SC4081(RS)	TRANSISTOR
	Q9	2SC4081(RS)	TRANSISTOR
	Q10	2SC4081(RS)	TRANSISTOR
	Q11	2SC4081(RS)	TRANSISTOR
	Q12	2SC4081(RS)	TRANSISTOR
	Q13	2SC4081(RS)	TRANSISTOR
	Q14	2SC4081(RS)	TRANSISTOR
	Q15	2SC4081(RS)	TRANSISTOR
	Q17	2SA1576(RS)	TRANSISTOR
	Q18	2SA1576(RS)	TRANSISTOR
	Q19	2SC4081(RS)	TRANSISTOR
	Q20	2SA1576(RS)	TRANSISTOR
	Q21	2SC4081(RS)	TRANSISTOR
	Q22	2SA1576(RS)	TRANSISTOR
	Q23	2SC4081(RS)	TRANSISTOR
	Q25	2SA1576(RS)	TRANSISTOR
	Q30	2SA1576(RS)	TRANSISTOR
	Q31	2SC4081(RS)	TRANSISTOR
	Q32	2SA1576(RS)	TRANSISTOR
	Q33	2SA1576(RS)	TRANSISTOR
	Q34	2SC4081(RS)	TRANSISTOR
	Q35	2SA1576(RS)	TRANSISTOR

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
Q36	2SA1576(RS)	TRANSISTOR	
Q37	2SC4081(RS)	TRANSISTOR	
Q38	2SC4081(RS)	TRANSISTOR	
Q39	2SC4081(RS)	TRANSISTOR	
Q40	2SA1576(RS)	TRANSISTOR	
Q41	2SC4081(RS)	TRANSISTOR	
Q43	DTC114EU	TRANSISTOR	
Q45	DTC114EU	TRANSISTOR	
Q46	2SC4081(RS)	TRANSISTOR	
Q47	DTA114EU	TRANSISTOR	
Q48	2SC4081(RS)	TRANSISTOR	
Q49	2SA1576(RS)	TRANSISTOR	
Q52	2SA1576(RS)	TRANSISTOR	
Q53	2SC4081(RS)	TRANSISTOR	
Q58	2SC4081(RS)	TRANSISTOR	
Q59	2SC4081(RS)	TRANSISTOR	
Q60	2SC4081(RS)	TRANSISTOR	
Q61	2SA1576(RS)	TRANSISTOR	
Q62	2SC4081(RS)	TRANSISTOR	
Q63	2SC4081(RS)	TRANSISTOR	
Q64	2SA1576(RS)	TRANSISTOR	
Q65	2SC4081(RS)	TRANSISTOR	
Q66	2SC4081(RS)	TRANSISTOR	
D2	DA204U	DIODE	
D3	DA204U	DIODE	
D4	DA204U	DIODE	
D5	DAP202U	DIODE	
R1	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R2	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R12	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R13	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R14	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R15	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R16	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R17	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R18	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R19	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R20	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R21	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R22	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R23	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R24	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R25	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R28	QRSA08J-391YN	RESISTOR	390Ω,1/10W
R29	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R30	QRSA08J-331YN	RESISTOR	330Ω,1/10W
R32	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R33	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R34	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R36	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R37	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R38	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R39	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R41	QRSA08J-331YN	RESISTOR	330Ω,1/10W
R42	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R44	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R45	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R46	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R47	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R48	QRSA08J-751YN	RESISTOR	750Ω,1/10W
R49	QRSA08J-751YN	RESISTOR	750Ω,1/10W
R50	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R51	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R52	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R53	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R56	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R57	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R58	QRSA08J-681YN	RESISTOR	680Ω,1/10W
R62	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R63	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R65	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
R66	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
R67	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R68	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R69	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R71	QRSA08J-133YN	RESISTOR	13kΩ,1/10W
R72	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R73	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R76	QRSA08J-474YN	RESISTOR	470kΩ,1/10W
R77	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R79	QRSA08J-163YN	RESISTOR	16kΩ,1/10W
R80	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R81	QRSA08J-241YN	RESISTOR	240Ω,1/10W
R82	QRSA08J-510YN	RESISTOR	51Ω,1/10W
R88	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R89	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R90	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R91	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R92	QRSA08J-391YN	RESISTOR	390Ω,1/10W
R93	QRSA08J-911YN	RESISTOR	910Ω,1/10W
R94	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R95	QRSA08J-331YN	RESISTOR	330Ω,1/10W
R96	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R97	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
R98	QRSA08J-331YN	RESISTOR	330Ω,1/10W
R99	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
R100	QRSA08J-821YN	RESISTOR	820Ω,1/10W
R101	QRSA08J-391YN	RESISTOR	390Ω,1/10W
R102	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
R103	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R104	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R105	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R107	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R108	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R109	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R110	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R111	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R112	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
R113	QRSA08J-151YN	RESISTOR	150Ω,1/10W
R114	QRSA08J-821YN	RESISTOR	820Ω,1/10W
R115	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R116	QRSA08J-821YN	RESISTOR	820Ω,1/10W
R121	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R122	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R123	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R124	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R125	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R126	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R127	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
R128	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
R130	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R131	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R133	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R134	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R135	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R136	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R137	QRSA08J-181YN	RESISTOR	180Ω,1/10W
R138	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R140	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R141	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R142	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
R143	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R144	QRSA08J-202YN	RESISTOR	2kΩ,1/10W
R145	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R146	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R147	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R148	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R149	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R150	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R154	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R155	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R156	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R157	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R158	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R159	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R160	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
R161	QRSA08J-271YN	RESISTOR	270Ω,1/10W
R162	QRSA08J-271YN	RESISTOR	270Ω,1/10W
R169	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R170	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R171	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
R172	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R173	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R174	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R175	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R176	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R177	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R178	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R180	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R181	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R182	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R183	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R184	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R185	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R186	QRSA08J-681YN	RESISTOR	680Ω,1/10W
R187	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R188	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R189	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R190	QRSA08J-391YN	RESISTOR	390Ω,1/10W
R191	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R192	QRSA08J-331YN	RESISTOR	330Ω,1/10W
R193	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R195	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R203	QRSA08J-151YN	RESISTOR	150Ω,1/10W
R204	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R206	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R207	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R208	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R209	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R210	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R211	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R212	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R213	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R214	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R215	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R216	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R217	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R219	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R220	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R221	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R222	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R223	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R224	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R225	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R226	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R227	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R228	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R229	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R230	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R231	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R232	QRSA08J-181YN	RESISTOR	180Ω,1/10W
R233	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R234	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R235	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R237	QCTA1CH-221	CAPACITOR	220pF,16V
R238	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R240	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
R241	QRSA08J-271YN	RESISTOR	270Ω,1/10W
R242	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
R243	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R244	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R245	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R246	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
C1	QCYA1HK-103	CAPACITOR	0.01μF,50V
C2	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
C6	QETC1AM-107	E CAPACITOR	100μF,10V
C7	QETC1AM-107	E CAPACITOR	100μF,10V
C8	QCFA1CZ-105	CAPACITOR	1μF,16V
C9	QCFA1CZ-105	CAPACITOR	1μF,16V
C10	QCFA1CZ-105	CAPACITOR	1μF,16V
C12	QCFA1CZ-105	CAPACITOR	1μF,16V
C13	QCYA1HK-103	CAPACITOR	0.01μF,50V
C14	QCTA1CH-390	CAPACITOR	39pF,16V
C15	QCFA1CZ-105	CAPACITOR	1μF,16V
C16	QCYA1HK-103	CAPACITOR	0.01μF,50V
C17	QCTA1CH-120	CAPACITOR	12pF,16V
C18	QCTA1CH-102	CAPACITOR	0.001μF,16V
C19	QCYA1HK-103	CAPACITOR	0.01μF,50V
C20	QCYA1HK-103	CAPACITOR	0.01μF,50V
C21	QCYA1HK-103	CAPACITOR	0.01μF,50V
C22	QETC1HM-105	E CAPACITOR	1μF,50V
C23	QCYA1HK-103	CAPACITOR	0.01μF,50V
C24	QETC1CM-336	E CAPACITOR	33μF,16V
C25	QETC1HM-105	E CAPACITOR	1μF,50V
C26	QCYA1HK-103	CAPACITOR	0.01μF,50V
C27	QCTA1CH-150	CAPACITOR	15pF,16V
C28	QAT3120-300Z	TRIM CAPACITOR,OSC	
C29	QCTA1CH-100	CAPACITOR	10pF,16V
C30	QCYA1HK-103	CAPACITOR	0.01μF,50V
C31	QCYA1HK-103	CAPACITOR	0.01μF,50V
C32	QCYA1HK-103	CAPACITOR	0.01μF,50V
C33	QCYA1HK-103	CAPACITOR	0.01μF,50V
C34	QETC0JM-477	E CAPACITOR	470μF,6.3V
C35	QCYA1HK-103	CAPACITOR	0.01μF,50V
C37	QCYA1HK-123	CAPACITOR	0.012μF,50V
C38	QCTA1CH-221	CAPACITOR	220pF,16V
C39	QETC1CM-336	E CAPACITOR	33μF,16V
C40	QETC1HM-474	E CAPACITOR	0.47μF,50V

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C41	QETC1HM-105	E CAPACITOR	1μF,50V
C46	QCYA1HK-222	CAPACITOR	0.0022μF,50V
C47	QCTA1CH-102	CAPACITOR	0.001μF,16V
C48	QCYA1EK-104	CAPACITOR	0.1μF,25V
C49	QETC1AM-107	E CAPACITOR	100μF,10V
C50	QCTA1CH-101	CAPACITOR	100pF,16V
C51	QETC1CM-106	E CAPACITOR	10μF,16V
C52	QETC1HM-105	E CAPACITOR	1μF,50V
C53	QETC1HM-105	E CAPACITOR	1μF,50V
C54	QCTA1CH-102	CAPACITOR	0.001μF,16V
C55	QCTA1CH-680	CAPACITOR	68pF,16V
C56	QCTA1CH-150	CAPACITOR	15pF,16V
C57	QETC1HM-475	E CAPACITOR	4.7μF,50V
C58	QETC1HM-474	E CAPACITOR	0.47μF,50V
C59	QCFA1CZ-105	CAPACITOR	1μF,16V
C60	QCYA1HK-103	CAPACITOR	0.01μF,50V
C61	QCYA1HK-103	CAPACITOR	0.01μF,50V
C62	QCTA1CH-560	CAPACITOR	56pF,16V
C63	QCTA1CH-101	CAPACITOR	100pF,16V
C65	QCFA1CZ-105	CAPACITOR	1μF,16V
C66	QCYA1HK-103	CAPACITOR	0.01μF,50V
C67	QCFA1CZ-105	CAPACITOR	1μF,16V
C68	QCFA1CZ-105	CAPACITOR	1μF,16V
C69	QCFA1CZ-105	CAPACITOR	1μF,16V
C70	QCFA1CZ-105	CAPACITOR	1μF,16V
C71	QCYA1HK-103	CAPACITOR	0.01μF,50V
C72	QCYA1HK-103	CAPACITOR	0.01μF,50V
C73	QETC0JM-476	E CAPACITOR	47μF,6.3V
C74	QCTA1CH-330	CAPACITOR	33pF,16V
C75	QCTA1CH-470	CAPACITOR	47pF,16V
C76	QCTA1CH-330	CAPACITOR	33pF,16V
C77	QCTA1CH-820	CAPACITOR	82pF,16V
C78	QCYA1HK-103	CAPACITOR	0.01μF,50V
C79	QCYA1HK-103	CAPACITOR	0.01μF,50V
C80	QCYA1HK-103	CAPACITOR	0.01μF,50V
C81	QCYA1HK-103	CAPACITOR	0.01μF,50V
C82	QCYA1HK-103	CAPACITOR	0.01μF,50V
C83	QCYA1HK-103	CAPACITOR	0.01μF,50V
C84	QCYA1HK-103	CAPACITOR	0.01μF,50V
C85	QCYA1HK-103	CAPACITOR	0.01μF,50V
C86	QCYA1HK-103	CAPACITOR	0.01μF,50V
C87	QCYA1HK-103	CAPACITOR	0.01μF,50V
C88	QCYA1HK-103	CAPACITOR	0.01μF,50V
C89	QCYA1HK-103	CAPACITOR	0.01μF,50V
C90	QCYA1HK-103	CAPACITOR	0.01μF,50V
C91	QCYA1HK-103	CAPACITOR	0.01μF,50V
C92	QCYA1HK-103	CAPACITOR	0.01μF,50V
C93	QCYA1HK-103	CAPACITOR	0.01μF,50V
C94	QCYA1HK-103	CAPACITOR	0.01μF,50V
C95	QCYA1HK-103	CAPACITOR	0.01μF,50V
C97	QCYA1HK-103	CAPACITOR	0.01μF,50V
C99	QETC1AM-107	E CAPACITOR	100μF,10V
C100	QCYA1HK-103	CAPACITOR	0.01μF,50V
C101	QCYA1HK-103	CAPACITOR	0.01μF,50V
C102	QCTA1CH-470	CAPACITOR	47pF,16V
C103	QCTA1CH-180	CAPACITOR	18pF,16V
C105	QCY81CK-105	CAPACITOR	1μF,16V
C106	QCY81CK-105	CAPACITOR	1μF,16V
C109	QCYA1EK-104	CAPACITOR	0.1μF,25V
C110	QCFA1CZ-105	CAPACITOR	1μF,16V
C111	QCYA1EK-104	CAPACITOR	0.1μF,25V
C112	QCYA1HK-103	CAPACITOR	0.01μF,50V

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C113	QCYA1HK-103	CAPACITOR	0.01μF,50V
C114	QCYA1EK-104	CAPACITOR	0.1μF,25V
C115	QCYA1HK-103	CAPACITOR	0.01μF,50V
C116	QCYA1HK-103	CAPACITOR	0.01μF,50V
C117	QCFA1CZ-105	CAPACITOR	1μF,16V
C118	QCTA1CH-471	CAPACITOR	470pF,16V
C119	QCTA1CH-560	CAPACITOR	56pF,16V
C120	QCTA1CH-102	CAPACITOR	0.001μF,16V
C121	QCTA1CH-221	CAPACITOR	220pF,16V
C126	QCYA1HK-103	CAPACITOR	0.01μF,50V
C127	QCYA1HK-103	CAPACITOR	0.01μF,50V
C128	QCYA1EK-104	CAPACITOR	0.1μF,25V
C129	QCTA1CH-101	CAPACITOR	100pF,16V
C130	QCYA1HK-103	CAPACITOR	0.01μF,50V
C136	QCFA1CZ-105	CAPACITOR	1μF,16V
C137	QCYA1HK-103	CAPACITOR	0.01μF,50V
C138	QCYA1HK-103	CAPACITOR	0.01μF,50V
C139	QCFA1CZ-105	CAPACITOR	1μF,16V
C140	QCFA1CZ-105	CAPACITOR	1μF,16V
C146	QCFA1CZ-105	CAPACITOR	1μF,16V
C147	QETC1CM-106	E CAPACITOR	10μF,16V
C151	QCTA1CH-390	CAPACITOR	39pF,16V
C153	QCFA1CZ-105	CAPACITOR	1μF,16V
C154	QCYA1HK-103	CAPACITOR	0.01μF,50V
C155	QCYA1HK-103	CAPACITOR	0.01μF,50V
C156	QCTA1CH-221	CAPACITOR	220pF,16V
C157	QCTA1CH-151	CAPACITOR	150pF,16V
C159	QCYA1HK-103	CAPACITOR	0.01μF,50V
C160	QETC1CM-107	E CAPACITOR	100μF,16V
C161	QETC0JM-337	E CAPACITOR	330μF,6.3V
C162	QCFA1CZ-105	CAPACITOR	1μF,16V
C163	QCYA1HK-103	CAPACITOR	0.01μF,50V
C419	QCFA1CZ-105	CAPACITOR	1μF,16V
L1	PU48530-560K	COIL	56μH
L2	QRD161J-330	RESISTOR	33Ω,1/6W
L3	PU48530-100K	COIL	10μH
L4	PU48530-100K	COIL	10μH
L5	PU48530-560K	COIL	56μH
L6	PU59988-180J	COIL	18μH
L7	PU59988-180J	COIL	18μH
L8	PU59988-180J	COIL	18μH
L9	PU59988-180J	COIL	18μH
L11	PU48530-560K	COIL	56μH
L14	PU59988-180J	COIL	18μH
LPF1	PELN1134	LOW PASS FILTER	
LC1	QRD162J-0R0	RESISTOR	0Ω,1/6W
X1	PEVB0636	RESONATOR	
⚠ X2	PU60568	CRYSTAL RESONATOR	
SLD1	PQ21567	SHIELD FRAME	
CN1	PEMC1102-117	CONNECTOR,(1-17)MAIN	
CN2	PEMC1102-117	CONNECTOR,(1-17)MAIN	

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Y/C SEPA BOARD ASSEMBLY <89>

PWBA1	PB20649D	Y/C SEPARATION BOARD ASSEMBLY
IC1	NJM2240M	IC
IC2	JCP0042	IC

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
Q1	2SC4081(QRS)	TRANSISTOR	
Q2	2SA1576(QRS)	TRANSISTOR	
Q3	2SC4081(QRS)	TRANSISTOR	
Q4	2SA1576(QRS)	TRANSISTOR	
Q5	2SC4081(QRS)	TRANSISTOR	
Q6	2SA1576(QRS)	TRANSISTOR	
Q7	2SC4081(QRS)	TRANSISTOR	
Q8	2SC4081(QRS)	TRANSISTOR	
Q9	2SC4081(QRS)	TRANSISTOR	
Q10	2SC3932(ST)	TRANSISTOR	
Q11	2SC4081(QRS)	TRANSISTOR	
Q12	2SC4081(QRS)	TRANSISTOR	
Q13	2SC4081(QRS)	TRANSISTOR	
Q14	2SC3932(ST)	TRANSISTOR	
Q15	2SA1576(QRS)	TRANSISTOR	
D1	DAP202U	DIODE	
R1	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R2	NRSA63J-471N	RESISTOR	470Ω,1/16W
R3	NRSA63J-361N	RESISTOR	360Ω,1/16W
R4	NRSA63J-332N	RESISTOR	3.3kΩ,1/16W
R5	NRSA63J-271N	RESISTOR	270Ω,1/16W
R6	NRSA63J-271N	RESISTOR	270Ω,1/16W
R7	NRSA63J-271N	RESISTOR	270Ω,1/16W
R8	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R9	NRSA63J-473N	RESISTOR	47kΩ,1/16W
R10	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R11	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R12	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
R13	NRSA63J-182N	RESISTOR	1.8kΩ,1/16W
R14	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R15	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R16	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
R17	NRSA63J-391N	RESISTOR	390Ω,1/16W
R18	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R19	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R21	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
R22	NRSA63J-391N	RESISTOR	390Ω,1/16W
R23	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R24	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
R25	NRSA63J-132N	RESISTOR	1.3kΩ,1/16W
R26	NRSA63J-472N	RESISTOR	4.7kΩ,1/16W
R27	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R28	NRSA63J-361N	RESISTOR	360Ω,1/16W
R29	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R30	NRSA63J-223N	RESISTOR	22kΩ,1/16W
R31	NRSA63J-223N	RESISTOR	22kΩ,1/16W
R32	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R33	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
R34	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
R35	NRSA63J-472N	RESISTOR	4.7kΩ,1/16W
R36	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R37	NRSA63J-361N	RESISTOR	360Ω,1/16W
R38	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R39	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R40	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R41	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
R42	NRSA63J-331N	RESISTOR	330Ω,1/16W
R43	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R44	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R45	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R46	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R47	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R48	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R49	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R50	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R51	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R52	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R54	NRSA63J-103N	RESISTOR	10kΩ,1/16W
R59	NRSA63J-0R0N	RESISTOR	0Ω,1/16W
R60	NRSA63J-102N	RESISTOR	1kΩ,1/16W
R63	NRSA63J-222N	RESISTOR	2.2kΩ,1/16W
C1	NCS31HJ-8R0A	CAPACITOR	8pF,50V
C2	NCB31HK-103A	CAPACITOR	0.01μF,50V
C3	QEK60JM-107	E CAPACITOR	100μF,6.3V
C4	NCB31HK-103A	CAPACITOR	0.01μF,50V
C5	QEK61EM-475	E CAPACITOR	4.7μF,25V
C6	NCB31HK-102A	CAPACITOR	0.001μF,50V
C7	NCB31HK-103A	CAPACITOR	0.01μF,50V
C8	NCT06CH-5R0A	CAPACITOR	5pF,50V
C9	NCB31HK-103A	CAPACITOR	0.01μF,50V
C10	NCB31HK-103A	CAPACITOR	0.01μF,50V
C11	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C12	QEK60JM-337	E CAPACITOR	330μF,6.3V
C13	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C14	QEK60JM-107	E CAPACITOR	100μF,6.3V
C15	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C16	QEK60JM-107	E CAPACITOR	100μF,6.3V
C17	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C18	QEK60JM-107	E CAPACITOR	100μF,6.3V
C19	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C20	QEK60JM-107	E CAPACITOR	100μF,6.3V
C21	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C22	QEK60JM-337	E CAPACITOR	330μF,6.3V
C24	QEK60JM-476	E CAPACITOR	47μF,6.3V
C25	NCB31HK-103A	CAPACITOR	0.01μF,50V
C26	QEK61HM-105	E CAPACITOR	1μF,50V
C27	NCB31HK-103A	CAPACITOR	0.01μF,50V
C28	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C29	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C30	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C31	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C32	QEK60JM-476	E CAPACITOR	47μF,6.3V
C33	NCB31HK-103A	CAPACITOR	0.01μF,50V
C34	NCB31HK-103A	CAPACITOR	0.01μF,50V
C35	QEK60JM-476	E CAPACITOR	47μF,6.3V
C36	NCB31HK-103A	CAPACITOR	0.01μF,50V
C37	QEKC1CM-106	E CAPACITOR	10μF,16V
C38	QEK60JM-476	E CAPACITOR	47μF,6.3V
C39	NCB31HK-103A	CAPACITOR	0.01μF,50V
C40	NCB31HK-103A	CAPACITOR	0.01μF,50V
C41	NCB31HK-103A	CAPACITOR	0.01μF,50V
C42	NCB31HK-103A	CAPACITOR	0.01μF,50V
C43	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C44	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C45	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C46	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C47	NCB31HK-103A	CAPACITOR	0.01μF,50V
C48	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C56	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C64	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C65	NCS31HJ-470A	CAPACITOR	47pF,50V
C66	NCS31HJ-470A	CAPACITOR	47pF,50V
C67	NCS31HJ-470A	CAPACITOR	47pF,50V
C68	NCS31HJ-470A	CAPACITOR	47pF,50V

#⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C69	NCS31HJ-470A	CAPACITOR	47pF,50V
C70	NCS31HJ-470A	CAPACITOR	47pF,50V
C71	NCS31HJ-470A	CAPACITOR	47pF,50V
C72	NCS31HJ-470A	CAPACITOR	47pF,50V
C73	NCS31HJ-470A	CAPACITOR	47pF,50V
C74	NCS31HJ-470A	CAPACITOR	47pF,50V
C75	NCS31HJ-470A	CAPACITOR	47pF,50V
C76	NCS31HJ-470A	CAPACITOR	47pF,50V
C77	NCS31HJ-470A	CAPACITOR	47pF,50V
C78	NCS31HJ-470A	CAPACITOR	47pF,50V
C79	NCS31HJ-470A	CAPACITOR	47pF,50V
C80	NCS31HJ-470A	CAPACITOR	47pF,50V
C82	NCB31HK-103A	CAPACITOR	0.01μF,50V
C83	QEK60JM-476	E CAPACITOR	47μF,6.3V
C84	NCF31EZ-104A	CAPACITOR	0.1μF,25V
C89	QEK61CM-106	E CAPACITOR	10μF,16V
C91	QRD162J-0R0	RESISTOR	0Ω,1/6W
C92	QEK61HM-474	E CAPACITOR	0.47μF,50V
L1	PU58201-100J	COIL	10μH
L2	PU48530-101K	COIL	100μH
L3	PU59153-101K	COIL	100μH
L4	PU59153-101K	COIL	100μH
L5	PU48530-101K	COIL	100μH
L6	PU48530-101K	COIL	100μH
L7	PU48530-101K	COIL	100μH
L8	PU59153-101K	COIL	100μH
L9	PU48530-101K	COIL	100μH
L10	PU48530-101K	COIL	100μH
LPF1	PELN0922-S	LOW PASS FILTER	
LPF2	PELN0922-S	LOW PASS FILTER	
LPF3	PELN0922-S	LOW PASS FILTER	
LPF4	PELN0922-S	LOW PASS FILTER	
LPF5	PELN0922-S	LOW PASS FILTER	
LC1	PU59736-102	N FILTER	
LC2	PU59736-331	N FILTER	
SLD1	PQ34851-1-1	SHIELD FRAME	
SLD2	PQ34852-1-2	SHIELD COVER,X2	
CN1	PEMC0757-113	HOUSING,(1-13)MAIN	
CN2	PEMC0757-112	HOUSING,(1-12)MAIN	

SECTION 6
TECHNICAL INFORMATIONS

6.1 SYSCON CIRCUIT

6.1.1 Syscon CPU pin function (IC601) 1/2

PIN NO.	LABEL	IN/OUT	NOTE
1	S. CURVE	IN	TUNING CHECK
2	D. V. DET	IN	DRUM DRIVE VOLTAGE DETECT
3	WIDE DET	IN	WIDE-SCREEN DETECT
4	AVGFM	IN	AUTO TRACKING DATA(AVERAGE VOLTAGE OF PB FM LEVEL) INPUT
5	AVSS	-	GND
6	TEST	-	GND
7	X2	-	MAIN SYSTEM CLOCK(10MHz)
8	X1	-	MAIN SYSTEM CLOCK(10MHz)
9	VSS	-	GND
10	OSC1	IN	SUB SYSTEM CLOCK
11	OSC2	OUT	SUB SYSTEM CLOCK
12	RESET	IN	RESET AT CONNECT VCR TO AC
13	(NMI)	-	NC
14	S. V. CS	OUT	Y/C SEPARATE CHIP SELECT
15	S. ID IN	IN	SCRAMBLE DETECT
16	P. DOWN	IN	POWER DOWN DETECT(POWER DOWN:H → L)
17	SYNC DET	IN	SYNC DETECT (NO SYNC:H)
18	LOCK DET	IN	TUNING LOCK CHECK
19	MCE	OUT	MEMORY IC CHIP ENABLE
20	EE(L)	OUT	EE MODE:L
21	R. PAUSE	IN	REMOTE PAUSE CONTROL(PAUSE ON:L)
22	TUFG	IN	TAKE-UP REEL ROTATION DET/TAPE REMAIN
23	P CTL	OUT	POWER CONTROL(POWER ON:H)
24	SUP FG	IN	SUPPLY REEL ROTATION DET/TAPE REMAIN
25	P MUTE(L)	OUT	PICUTURE MUTE CONTROL(MUTE ON:L)
26	HRECST(L)	OUT	HiFi REC START:L
27	FEHCTL	OUT	FLYING ERASE HEAD CONTROL(FE ON:H)
28	A MUTE(L)	OUT	AUDIO MUTE CONTROL(MUTE ON:L)
29	AI DATA	OUT	AUDIO CONTROL DATA OUTPUT
30	AI CLK	OUT	AUDIO DATA TRANSFER CLOCK
31	H SEL	OUT	HEAD SELECT CONTROL(SP:L/LP:M/EP:H)
32	A/M/S	OUT	PRE/REC CIRCUIT CONTROL(AUTO:M/MANUAL:H/S&S:L)
33	V. REC(H)	OUT	VIDEO REC MODE:H
34	REC ST(H)	OUT	REC START:H
35	PLL DATA	OUT	TUNING CONTROL SERIAL DATA OUTPUT
36	S. CLK	OUT	DATA TRANSFER CLOCK
37	SERVO(L)	OUT	CAPSTAN MOTOR CONTROL(SERVO:L/MECHACON:H)
38	PAUSE(L)	OUT	CAPSTAN MOTOR CONTROL(PAUSE:L)
39	MECHA DATA	IN/OUT	MECHANISM MODE CONTROL DATA INPUT
40	MECHA CLK	OUT	MECHANISM MODE DATA TRANSFER CLOCK

Table 6-1-1-A SYSCON CPU pin function (1/2)

6.1.2 Syscon CPU pin function (IC601) 2/2

PIN NO.	LABEL	IN/OUT	NOTE
41	JSA	IN	JOG DIAL PULSE INPUT
42	JSB	IN	JOG DIAL PULSE INPUT
43	STL(L)	IN	SHUTTLE SWITCH
44	CTL CLOCK 2	IN	INDEX CONTROL
45	VPCTL	OUT	V. PULSE ADDITION TIMING CONTROL
46	CAP REV	OUT	CAPSTAN MOTOR CONTROL(FWD:H/REV:L)
47	WIDE(H)	IN	WIDE-SCREEN MODE:H
48	DETS	IN	S-VHS PB:H/VHS PB:L
49	EXP DATA	OUT	ABIT EXP DATA for CH PLS CONTROL
50	REMOTE	IN	REMOTE CONTROL DATA INPUT
51	IIC CLK	OUT	NICAM DATA TRANSFER CLOCK
52	CTL C/D	IN	CTL PULSE INPUT(MODE DETECT/BLANK PORTION DET)
53	IIC DATA	IN/OUT	NICAM CTL DATA OUTPUT
54	AV2 SEP(L)	OUT	AV2 INPUT SELECT:L
55	LCM1	OUT	LOADING MOTOR DRIVE(1)
56	LCM2	OUT	LOADING MOTOR DRIVE(2)
57	S-OUT	OUT	ON SCREEN CONTROL DATA
58	S-IN	IN	ON SCREEN /FDP CONTROL DATA
59	S-CLK	OUT	DATA TRANSFER CLOCK
60	SERVO DATA	OUT	SERVO IC CONTROL DATA
61	M. DATA	IN/OUT	MEMORY IC DATA
62	SERVO CLK	OUT	DATA TRANSFER CLOCK
63	VCC	-	SYSTEM POWER
64	STB	OUT	CLOCK OUTPUT PERMISSION
65	TU CTL(H)	OUT	TUNER MODE:H
66	ND	IN	NORMAL AUDIO DETECT(NORMAL AUDIO:L)
67	CTL CLOCK	IN	INDEX CONTROL
68	V UP	OUT	CAPSTAN MOTOR DRIVE VOLTAGE SELECT(M17V:H)
69	CAP FG	IN	TAPE SPEED DETECT/BACK SPACE COUNT
70	DUTY I/O	IN/OUT	IN/OUT INDEX DATA CONTROL
71	D. FF	IN	DRUM ROTATION DETECT/REC TIMING CONTROL
72	AVCC	-	SYSTEM POWER(for ANALOG)
73	SECAM(L)	IN	SWCAM MODE:L
74	SPEED CTL V	OUT	TAPE SPEED CTL VOLTAGE OUTPUT
75	DRUM V	OUT	DRUM MOTOR CONTROL
76	CAP V	OUT	CAPSTAN MOTOR CONTROL
77	PROTECT	IN	POWER PROTECT DETECT(POWER OFF:L)
78	A. LEVEL L	IN	AUDIO INDICATOR LEVEL INPUT(Lch)
79	A. LEVEL R	IN	AUDIO INDICATOR LEVEL INPUT(Rch)
80	THERM	IN	THERMIC CORRECTION(SLOW CAPSTAN BRAKE CTL)

Table 6-1-1-B SYSCON CPU pin function (2/2)

E. & O. E. No. 82510